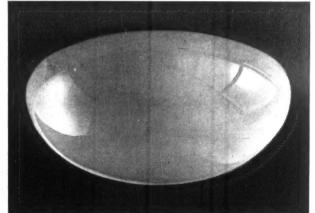
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THE ARCHITECTURAL REVIEW

Volume 126 Number 753 November 1959



This month's cover shows an unmistakably Scandinavian interior—in the East End of London. The new Danish Seamen's church in Commercial Road, built to replace the earlier one destroyed during the war, is the work of the Danish architect Holger Jensen, in collaboration with the English firm of Armstrong and MacManus, Its unusual, well-detailed interior is described and illustrated on pp. 261-264.

J. M. Richards Nikolaus Peysner

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BOOK REVIEWS

Magnificence Abroad

THE PUBLIC BUILDINGS OF WIL-LIAMSBURG, COLONIAL CAPITAL OF VIRGINIA, AN ARCHITECTURAL HISTORY, WILLIAMSBURG ARCHI-TECTURAL STUDIES, VOL. I. By Marcus Whiffen, Colonial Williamsburg, distributed by Holt. \$12.50.

Cries of 'Varsity Four,' 'American Four,' struck the gentleman from The Times as new on June 9, 1869. The first Oxford-Harvard four-oared race was to be rowed in August; but this 'unexceptionable' June morning marked the two-hundred-first Encaenia since the Sheldonian Theatre opened. Wren's partly-flat roof (rebuilt) shook to the 'uninterrupted din' as the Undergraduates proceeded to shout down the Vice-Chancellor, the Public Orator and the Prize Men. Nobody but John Andrew Doyle heard his recital of his Arnold Prize Essay on the unusual subject set for 1869: 'The English Colonies in America before the Declaration of Independence.'

Less raucously greeted is to-day's book on a segment of American history seen through British eyes. Marcus Whiffen has won for it from the Society of Architectural Historians the Alice Davis Hitchcock Medallion for 1958. May it live as long as Mr. Doyle's writings. It is a study of the fulfilment of architectural needs in a new seat of government: the capital of Virginia next after Jamestown, named for William III. and built during the years between Wren's late work at home and Jefferson's early architectural efforts in Williamsburg itself. Depicted in a tenth and last chapter is the fate of the little city (population 1,800 at most) after removal of the capital to Richmond in 1780, and its restoration-reconstruction since 1926 by generosity of John D. Rockefeller, Jr. Mr. Whiffen, resident in America as

Mr. Whiffen, resident in America as Mr. Doyle was not, left none of his knowledge at home and found abroad much unexploited material. Combining these assets, he has dovetailed the documentary edges as neatly as an eighteenth-century joiner. The significance of dispatches to London is sharpened by news from the Islands. Both are matched against Virginia manuscripts (four reproduced as appendices), archaeological reports, and a variety of pictorial records. Even Wren's Sheldonian roof shows up among the ninety-five illustrations (figs. 25 and 26, not 22—one of the few printing mishaps, the worst being the confusion of a Thomas' with Gilbert Leigh [fl. 1756–1792] of North Carolina and [1764] King William County, Virginia in the specific of the confusion of the con

ginia, joiner).
With a detachment seldom achieved by local historians anywhere, Mr. Whiffen maintains proper colonial scale. He concludes that the College, the Capitol, the Palace, Bruton Parish Church, the Gaol, the Debtors' Prison, the Magazine, Indian School, Playhouse, Courthouse, Mental Hospital, and all the rest belonged,

as many buildings of their time in the English provinces belonged, to an older tradition' than English Baroque and owed their composite effective-ness to axial placement à la française. But he feels for the prideful citizens and dazzled travellers to whom the 'Publick Buildings' of Williamsburg were unquestionably 'Magnificent.'

Whiffen's detachment tends, nevertheless, to obscure the obvious now and then. For example, he would like to know more of Thomas Hadley, 'engaged in England' as surveyor to the College. Some British reader, with wills at hand, may supply this want. American readers, noting the wife's name, will recall the portrait of Maj. Thomas Savage her father (D.N.B.: quaere origin; 1635 certificate from St. Albans, Herts.; reputed brother, The Rev. Arthur Savage from Sussex [M.A. Cantab.], Prebendary of Carlisle 1660–1700); and the activities of Capt. Samuel Ravenscroft her first husband, a founder of Puritan Boston's Anglican Church, 1686, and in 1689 (New England's version of the Glorious Revolution) a prisoner for adherence to the very Governor Sir Edmund Andros who in Virginia laid the College foundation on August 8, 1695. No wonder Hadley was 'pretty well in favor' with Andros! Precisely when was Hadley 'advanced £40 in England? The intriguing fact is that on May 8, 1696, 'Thomas Hadley of James Citty County in Virg* Gent.' gave power of attorney to his 'Dear and Loveing wife Dyonisia' to recover money due him in New England. Due him for what? All the unattributed houses in Boston rush to mind. The question is open
Louise Hall

Empire Builder

LOOKING AT ARCHITECTURE IN CANADA. By Alan Gowans. Oxford University Press, Toronto, 1958. 3 gns.

architecture Canadian starts French on the one hand, English and New-English on the other. Is it Canadian now? Mr. Gowans whose book on Church Architecture in New France (1955) and also papers in The Art Bulletin and the Journal of the Society of Architectural Historians have established him as one of the few experts on Canadian architecture of the past (Prof. Eric Arthur is another, M. Morisset a third, Dr. Hubbard a fourth) answers in the positive, but illustrates few and not the best recent Canadian buildings. Did he perhaps exclude Mr. John Parkin's work because it is not specifically Canadian? If so, that would dispose of one of the criticisms readers may raise against a book which is by and large an undiluted pleasure, easy to read and easy to handle, amply illustrated and, as the bibliographical notes prove, based on a far from parochial knowledge of architectural history.

Readers in this country ask themselves primarily what in Canadian qualifies for interest architecture outside Canada. The answer is a number of pretty French-Provincial churches around Quebec, a number of Martello towers just like ours, the fine Province House (of 1811-18) at Halifax, Nova Scotia, of which Halifax, Yorkshire, might well be proud, the church at Niagara, which could stand at New Haven or Salem, and then, of growing size and pre-tence, the Paroisse at Montreal of tence, the Paroisse 4. 1824-9, which can seat 12,000, University College, Toronto, and the Parliament Buildings at Ottawa, the former Norman of 1856, the latter before the fire of 1916-a virile

Gothic of 1859. Either of these two. to repeat it, would be an ornament to any provincial British city. They are in any case the one by W. F. Cumberland born in London, the other by Thomas Fuller born at

But then Mr. Gowans deserts us He still points out correctly that certain buildings of McGill University and the imposing City Hall of Toronto (by the Toronto-born E.J. Lennox) are Richardsonian, and that Bruce Price, the architect of the Château Frontenac at Quebec was a Boston man, but he is not explicit on the omen which these facts spell and he is all but silent on the acceptance of the skyseraper in Canada, although the skyscraper has completed what Canadian Richardsonians and Bruce Price had begun: the turn of Canadian architecture from England to the United States. If we are asked today and mostly in vain-whether there is something specifically Canadian in contemporary Canadian architecture, we don't mean something to distinguish it from English but from American buildings. That surely is the greatest change in direction so undergone by architecture in Canada, and it ought to have been commented on in Mr. Gowans's book. After all, Canadians—that is Anglo-Canadians—don't like being Vancouver from San Francisco? We over here may be excused for not having an answer. Mr. Gowans should have one, but the one he has certain recent churches in the province of Quebec and in British Columbia-is neither wholly convinc ing on the strength of style nor of quality. N.P.

Detailed Reference

ARCHITECTS' WORKING DETAILS A 5, Edited by D. A. C. A. Boyne and Law Wright, Architectural Press, 25s.

One might say that the design of a building is only as good as its detailing, but it is often a neglected facet design, partly due to the practice, in this country, of leaving the detail-ing until the contract has been signed and building commences, by which time it is detached from the design process and the architect loses interest. Again it often suffers from belated attempts to regain lost time or to make savings to counteract

extras.

Architects' Working Details No. 5 is the latest in a well established series and should stimulate the interest of students as well as architects. Its principal value, however, is as a reference book for practising architects and their assistants, to provide inspiration for those already interested in imaginative detailing and to inject enthusiasm into those whose interest is lukewarm. It is not intended as a compendium of stock solutions to tricky or unusual problems of detailing but, by illustrating a number of good solutions, it aims to underline the relevant issues and the many possibilities inherent in any

Joiners' Handbook

THE DESIGN AND PRACTICE OF JOIN ERV. By John Eastwick-Field and John Stillman. Architectural Press, 42s.

One of the most objectionable features of present-day publishing is, to my mind, the pseudo textbook which, hoping for popularity, fails to

trouble the reader with enough technical matter to be of any practical use, or in which the author allows himself to be carried away by what some public relations officer has told him about a new material. This book is innocent of these sins. I have been trying to fault it on some minor point, by remembering some fact likely to be missed—such as the effect of l ing timber which has been kilned specially to withstand excessive central heating lying around on a damp site. Sure that at last I have scored. have rushed to the book, only to find the matter clearly explained (in this instance on pages 44 and 45). I consider it as clear and compact introduction to a technical subject as one could wish.

I cannot do better than quote Professor Robert Matthew's introduction: 'When sections of this book appeared in serial form a year or two ago, in The Architects' Journal, it was evident that a new standard in textbook writing was about to be attained. This promise has been amply fulfilled.'

Frank Austin

CORRESPONDENCE

The Picture Wall

To the Editors,
Sees. Mr. Brawne's interesting
Wall has ,-Mr. Brawne's interesting on 'The Picture Wall' has focused attention on some of the problems of displaying works of art in the highly artificial and exhausting conditions of the museum.

There is a further aspect of this problem which is likely to become even more serious in the future: that of catering for large numbers. Anyone who has tried to enjoy pictures at any popular Temporary Exhibition at the Tate Gallery during recent years will appreciate the point.

If more and more people are going to look at pictures—and increasing ducational opportunity makes this likely as well as desirable—some radical changes will become essential. Either museums and art galleries will have to be considerably decentralized or some new way of showing pictures will have to be adopted. exciting scheme at Sao Vicente seems to have wider applicability and would surely not only be 'a useful technique where a spoken commen-tary has to be illustrated with examples.' One can imagine a series of small auditoria placed around a revolving stage so that many groups of people could view at the same talking if they wish, or being talked to sometimes, or just looking.

The drawbacks the author men-tions in some such scheme would surely be less serious than having to look at a painting over the shoulders of a burly man or through the feathers of a woman's hat. And one would be seated and therefore relaxed and

more perceptive. Yours, etc. MOLLY HARRISON.

Churchyard Outrage

To the Editors.

London, E.2.

Sirs,—On a recent visit to the old church at Scarborough I took the enclosed photographs of 'improve-ments' which are being carried out there. I think that they merit the attention of the REVIEW.

In John Betjeman's 'Guide to English Parish Churches' the old headstones in Scarborough church-yard are described as magnificent. Now all those in the area west of the





1. broken urns and tombstones in Scarboro

2, the zigzag row of the gravestones which have been preserved.

church have been unrooted and piled up by the pathside like dominoes It is apparent that no care whatso ever has been taken to preserve the splendid carving on many of the headstones. They have been stacked up with the face of one grinding into the back of another, and in many cases the slabs appear to have been deliberately destroyed. Fragments of urns, anchors, and inscriptions are piled by the pathside. About half of the headstones have been 'saved' and arranged in a neat depressing pattern at one end of the churchyard. They form a dead little

So far the gravevard south of the church has not been touched and is still in its original 'untidy' state In it there are many beautifully carved headstones decorated with anchors, rudders, urns, sextants. etc. I think it probable that unless steps are taken to prevent it, the qualities of this area will also be destroyed.

Yours, etc. GRAHAM S. HUDSON.

Leeds

Housing Societies

To the Editors.

I am making a study of the early housing societies which were providing lodging houses and family dwellings for the workers in the period from 1840–1860, and I am anxious to obtain more information about Henry Roberts, the architecture who designed some of the earlies 'model' dwellings. Apart from the notice in the Dictionary of Nation: Biography and an article in you issue of May, 1943, and another in The Builder of January, 1952, the is very little material, and I shoul be grateful if any of your reader could let me know of any other references, letters, etc., which would help me in my research.

Yours, etc., (Mrs.) E. M. McWilliam. 65 Vineyard Hill Road, Wimbledon, S.W.19.

MARGINALIA

Most Ancient Monuments

The Fifth Annual Report* (195) of the Ancient Monuments Boards for England, Scotland and Wales notable in that the first two mon-

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me is on which it reports are the old at architectural works of any size in England Stonehenge and Avoury. At the former, as is well-km vm. a major piece of restoration was undertaken in 1958, the re-ere-tic of stones 57, 58 and 22 to re-for athetrilithon visible in eight centager ary prints of the henge. Viewed in a rms of its proportion of the total but of the monument, the re-erectic of this trilithon must be the most dr. tic piece of restoration practised on any monument in England for many wears, and raises some nice pool ds in the morality of Antiscrape, Ple sing Decay, and the extent to which the Picturesque Mode of Vision is or is note tied to eighteentheere ury scenery.

However, while this major work wa- going on, ancillary operations brought up two matters of technical interest bearing on the age and struction of Stonehenge. When Lintel 122 was moved, it was found to have sets of mortise-holes on underside. This has been interpreted as meaning that the lintels of the Outer Circle, at least, were 'pre-fabricated' to standard size and mortise-spacing, and that 122 had to be altered to accommodate a closing error due to inaccuracies in the setting up of the circle. The other matter was the exploration of the ramp leading down towards the base of Stone 56 (Great Trilithon), which produced a number of antler fragments among the earth with which the ramp-cutting had been backfilled. A radio-carbon dating of these should help establish a certain date for the building of Stonehenge as we know it to-day.

The report on Avebury is as brief in its essentials as it is welcome in its implications that excavations should be resumed there, beginning with the elucidation of the so-called 'North Setting,' a smaller circle within the main ring of stones.

A Half Century of Gordon Russell

If ever there were need of living proof that modern design is rooted in the Arts and Crafts Movement, the furniture produced over the years by Gordon Russell at Broadway would furnish it. The recent exhibition at the Tea Centre, London, to



 a section of the Gordon Russell exhibition.
 oak sideboard with laburnum handles made in 1926.

celebrate Sir Gordon Russell's lifty years in cabinet-making, beginning with a school-boy piece of 1909, gave a remarkable picture of the continuity of development from late, but pure, Arts and Crafts designs, done under Gimson's influence in the early twenties, through to the Mainstream Modernism of his work of the present day. The crucial phase of this development was the very late twenties and early thirties, a period ushered in by Russell's literally epoch-making contract for mass-produced Murphy radio cabinets. However, this excursion with

craftsmanly standards into the world of serial production, had been preceded by the refinement of those standards to the point where the transition to modern would be almost imperceptible—the illustration, 3, shows chairs of 1927 8, a table of 1925, a chest of 1928, and a 'modern' dressing table of 1930.

But the Arts and Crafts phase of Sir Gordon's output should not be regarded merely as a precursor to modern. It had the positive—even idiosyncratic virtues of the movement in full; its products often deserve Nikolaus Pevsner's accolade 'the best of (them) now belong to the classics of the Arts and Crafts.' A case in point at the exhibition was the oak sideboard, 4, from the threshold of the modern phase, 1926, which has much of the gaunt grandeur one associates with Gimson's larger pieces, or the extraordinary furniture Mackintosh designed for the Bassett-Lowke house in Northampton.

Peacock Room

As a postscript to Peter Ferriday's article, 'Peacock Room' in the June AR, Mr. Noel Spencer, headmaster of Norwich Art School, sends the drawing on the left, of Jeckell's Pavilion in Chapelfield Gardens, Norwich, made by him a year or two before its demolition. Constructed entirely of wrought and cast iron, it was designed in 1876, shown at the Philadelphia Exhibition of that year and at the Paris Exhibition of 1878 and bought afterwards by the Norwich Corporation, who demolished it about 40 years later.

INTELLIGENCE

Brian Hackett, Senior Lecturer in Landscape Architecture in the University of Durham, has been invited to fill the Chair of Landscape Architecture of the University of Illinois for a period of two years and will be taking up the appointment at the end of this year.

At its meeting in Lisbon on September 24, the Sixth Ordinary Assembly of the International Union of Architects elected the executive committee for 1959 to 1961. The President will be Hector Mardones Pestat, of Chile; Vice-Presidents, Robert H. Matthew of Great Britain,

Yang Ting-Pao of China, and Carlos Ramos of Portugal; Secretary General, Pierre Vago of France, and Treasurer, Willy Van Hove of Belgium.

The 1961 Congress of the International Union of Architects, to be held at the Festival Hall in London, will have the theme 'new techniques and materials: their impact on architecture.' There will be three subdivisions of the subject; 1, historical survey of architectural change caused by new techniques and materials. 2, the influence of reinforced concrete on architecture, present and future. 3, the impact on architecture of industrialized building methods. Proposed speakers include Lewis Mumford, Nikolaus Pevsner, Bruno Zevi, Luigi Nervi, Verne Ketchum, Kryniewiecki, H. van Kuyck and R. Llewely nDavies.

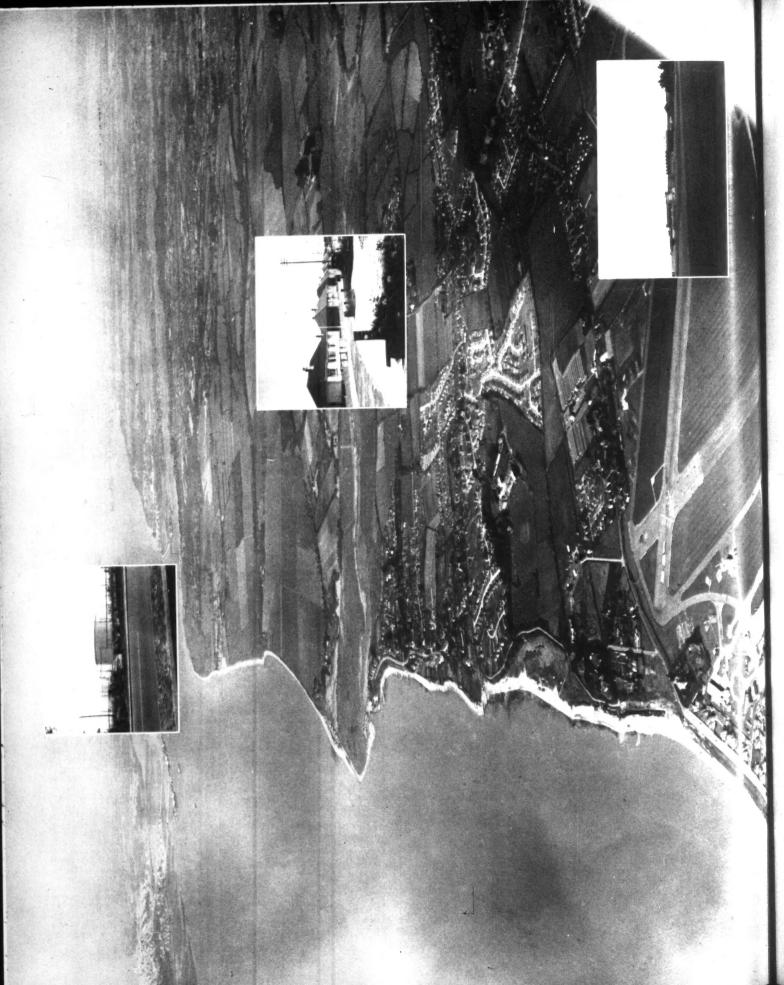
A tripartite conference is to be held at Sunridge Park from December 2 to December 5 to discuss a number of the problems facing the building industry.

A Building Centre is being formed in Manchester, in affiliation with the London Building Centre. It will provide an unbiased information service and space for lectures and visiting exhibitions. Enquiries should be sent to the Director, Mr. John P. Griffiths, at the temporary office in the Department of Building, The College of Science and Technology, Sackville Street, Manchester, 1.

ACKNOWLEDGMENTS

Cover: Sport and General Press Agency, Correspondence and Mar-GINALIA, pages 229-231: 1, 2, Graham Hudon; 3, Gordon McLeish; 4, Gordon Russell. Frontispiece, page 232: AR Aerial Unit. Hostel at Hol-land Park, pages 236–241: 7, Hol-land and Hannen and Cubitts; remainder, Henk Snoek, Object on View, pages 242–253: 1, Corning Glass Works; 4, Denys Lasdun; 9, Comfotos; 10, Foto Studio Casali; 13, 15, Fotogramma; 16, Casabella; 17, 18, Wolfgang Siol; 20, Hamlyn Silverstone; 23, 24, Cutty Sark Society; 25, Eric de Maré; 26, Byggekunst; 27–29, 31, Carlo Scarpa; 32, Japan Architect; 33–36, Foto F Maurer; 37, Alexandra Georges. Factory Extensions at Duxford, pages 254 260: 1, 13, C.I.B.A.; 2 8, 10 12, 14, 15, Colin Westwood; 9, John Pantlin, Internor Design, pages 261-265: 1, 2, 9, 10, 12, 13, John McCann; 3-8, Galwey Arphot; 11, Sport and General Press Agency; 14, 15, Unesco Claude Bablin, Design Review, page 266: 1, 2, Sam Lambert: 3, 4, Henk Snoek, Suisse-ROMANDE, pages 269–274: pages 269, Dariush Borbor; page 270, C. Schmidig, G. Klemm, Dariush Borbor, Photo Hofmann, G. Klemm; page 271, Yvan Butler, V. Bouverat, G. Klemm; page 272, G. Klemm; page 273, G. Klemm; page 274, V. Bouverat, L. Bacchetta, G. Klemm. University of the Panjab, pages 275-278: Michael Boys. Current Architecture, pages 279-282: 1-5, Toomey, Arphot; 8, Cement and Concrete Association. WORLD, pages 283–284: 1–3, Foto Levi; 4, 7, 8, 283-284: 1-3, Foto Levi; 4, 7, 8, Bauen-Wohnen; 5, 6, L'architecture d'aujourd'hui; 9, Architectural Record; 10, 11, Look; 12–14, Byggekunst. Miscellany, pages Byggekülist. Mildenstein & Co.; 2-4, Arts Council of Great Britain. Art in Use, Leicester Evening Mail. Counter Attack, Dungeness, Nairn, Arphot; Tenby, Raymond Spurrier. Townscape, Associated Press.





For many parts of the British Isles all the
separate urbanizations we have been practising
are beginning to coalesce. This was the moral of
Outrage, and the proof is in this air photograph

of part of Southampton Water. Not only does it show the end of Portsmouth-Gosport (foreground) and the beginning of Southampton (background) separated by less than a mile of countryside; on the left-hand side is Fawley refinery, and in the centre was the site for the proposed Caltex refinery, now postponed but liable to be taken up again at any time. The Hampshire County Council are the first in the country to take serious account of this running together, in their 'green mantle' proposals described below. The final irony is that part of the very thin designated green strip between Southampton and Portsmouth is occupied by yet another kind of urban colonization: the airfield at Lee on Solent, whose runways form the main feature in the air view.

Ian Nairn

ed of semiliar radio addition believe to has become more

between them, year a year good idea, as long a

GREEN MANTLE

Four years ago the Ministry of Housing sent out a now famous circular on provincial green belts. In terms that it is probably fair to say were kept deliberately vague it suggested that the green belt idea could be applied to any large town. It did not say which towns, and it did not suggest how big the green belt should be; the interpretation was left entirely to the recipients, which meant the County Councils.

Most counties took this to mean an equivalent in size and shape to the London Green Belt, applied to the bigger conurbations. Some of the conurbations proved amenable; most showed that their councillors were still living in the 1920's, convinced that a bigger city must be a better city. One of the more flagrant examples was Birmingham's recent application for 2,000 acres of Warwickshire and Worcestershire which went to public inquiry in July, accompanied by a fine selection of aldermanic baby talk: 'land only supporting cows and sheep' and so on. Other counties, such as Durham, tried the reasonable and logical step of establishing green belts around all the larger towns in the county—e.g., Darlington and West Hartlepool—only to find that the elected representatives thereof had somehow never conceived of such things as applying to them.

One county went much further than this. Hampshire took the Ministry's circular in its widest sense, saw that its whole coastline was running together, partly in a sort of second degree sprawl from London (the principle being that if you have to jump the green belt you then might as well jump as far as the coast), partly because it was a natural place for people to retire to, partly through the growth of Portsmouth, Southampton and Bournemouth, partly through the drift to the South. It would be difficult to find a better place to show all the elements of unplanned decentralization brought together. The county council treated the area from Havant to the Dorset border as a potential conurbation and designated an expanded version of the green belt—what might be

termed a green mantle—over the whole area, about ten miles deep (see map) leaving a little land for expansion round each of the big centres. They selected a number of rural or semi-rural villages therein as suitable for limited expansion (in each case providing town maps) and provided for the other villages to be enlarged only in cases of proved local need. The proposals went on the Ministry last October, closely followed by protests from Portsmouth and Southampton* (who both actually said, of the proposals for a belt between them: yes, a very good idea, as long as it starts at Titchfield Haven. As this is a creek exactly halfway between them, it would have been the thinnest green belt on record). In February the Ministry replied saying that these proposals were a major enlargement of green belt ideas and asked the county council to justify them to the extent of showing that the land set aside for expansion would meet any foreseeable requirements until 1971.

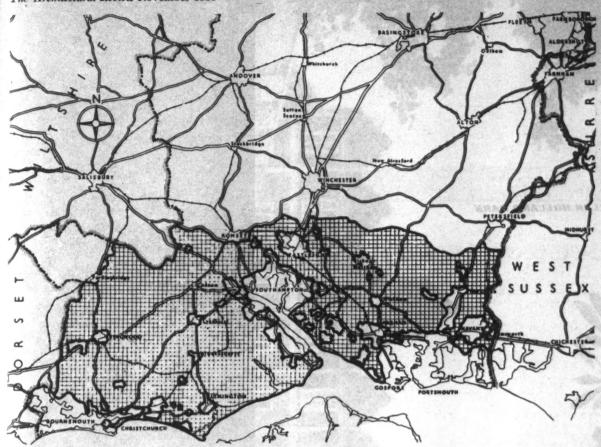
In other words, Hampshire was to be the nation's guinea-pig: overspill and growth figures were for the first time to be made the subject of a really painstaking calculation; a calculation which surely should have had the assistance of a research team at the Ministry, as the whole nation would benefit from the result. Instead, the onus was thrown entirely on an already overworked county planning staff. In three months they did exactly what was asked for, and they did it the hard way. They assessed the number of vacant acres in each area, they assessed where possible (from rejected applications) what the average builder thought he could get on to these acres; then they computed the number of people that could be housed, using a mixture of 3.2 persons per dwelling where dwelling plots could be guessed at, and unexceptionable net residential densities averaging about 18 persons per acre for the remainder. The population increase from all causes was obtained by projecting the 1951-57 trends as far as 1971 (allowing for the increase in immigration since licensing restrictions were ended in 1953). In eleven out of the twelve areas concerned these results showed that the land allocated would provide for more than the estimated increase in people to twenty-five thousand. Only one district— Havant-showed an estimated deficit, of six thousand people or approximately ten per cent of the estimated surplus in all the other areas.

Put very briefly, what this marathon survey showed was that even applying stringent green belt proposals to the whole of an area there is still enough land available, in the undeveloped plots or immediately next to existing villages, to cope with any demand at least to the 1970's (there is really no point in planning further ahead than this). It is a conclusion which common sense and common observation forces on anyone who goes about the countryside with open eyes, but that is a very different thing from proving it in cold figures in one of the most vulnerable areas in the country.

* But not from Bournemouth, which realized the basic sense of the proposals, even if only on the ground that the surrounding countryside was a big part of Bournemouth's amenity and hence had a cash value. Roughly speaking the County's proposals have been agreed outside the Bournemouth boundary and the County have agreed to raise no objections to Bournemouth doing what they wish inside their boundary. This seems a fair working compromise.

The public inquiry was held in July; the chief objectors being, as expected, Portsmouth and Southampton county boroughs. Southampton's objections. were to some extent disagreements in detail between friends, as in fact a green belt had been agreed with the county council in 1954 before the Ministry circular ever came out. But Portsmouth proved to be a copybook case of the bone-headed county borough unable to think in any other terms but peripheral expansion and bigger and better rateable value. At one stage it actually proposed a green belt which would begin at Butser Hill, twelve miles from the city, which for those who know Hampshire is occasion for quiet mirth. It wanted to build on the Southwick estate, just north of Portsdown, which is true countryside, well farmed, high grade agricultural land, and a blessed relief to inhabitants of the Portsmouth byelaw streets and council estates, which are as dreary as they could be. The county council proposals for Portsmouth's problem were crisp and constructive: no new incursions into rural areas, proper building up of the weird satellite at Leigh Park, north of Havant (it is unfortunate for the Portsmouth city fathers that the county council could show that there is still sufficient corporation land at Leigh Park to take another 2,400 houses, and that contracts there had been suspended at the very same time as Portsmouth were wanting to build on the Southwick estate), and in particular the building up of Hayling Island which seems the natural solution to any of Portsmouth's overspill problems. Hayling Island has been left out of the green area entirely; with one new road bridge from Eastney it could make Portsmouth into a twinisland city with room for everyone. These proposals are combined with eloquent comment, directed at Southampton also, on the need for proper city redevelopment and urban renewal at the centre, which anyone who has walked around the centre of Portsmouth can endorse.

In fact, the county council sees the green mantle as only the first step, the next being proper renewal in the city centres and careful control—which they think they can maintain—over the villages selected for expansion, so that they become or remain real places, not just collections of separate building units. And the actual list of these villages,



map showing the Hampshire County Council's plan for a coastal green area.

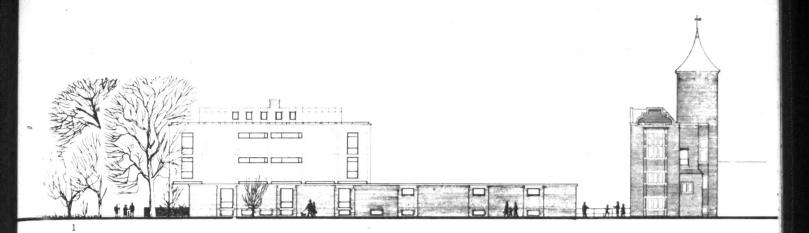
to one who knows the county, makes one very hopeful about the county council's ability to achieve this: they are either shrunken small towns, which Hampshire has a lot of and which need more people to stay viable—Ringwood, Wickham, Romsey—or else existing areas of sporadic building which can only benefit from infilling and enlargement—Colden Common, Denmead, Bransgore. The compact nucleated villages like Hambledon or Beaulieu are to be left alone and will be subject to conditions of consent as strict as apply to the villages in the London Green Belt.

This in fact is the only solution for large areas of Great Britain if we are to keep any real countryside at all and not descend to a complete mixing of all the landscape elements, however well designed, which is foisted off as a new type of landscape in the USA mainly because its protagonists can't think what on earth to do with it or how to stop it. What has happened to southern Hampshire ought to be applied in every area where the natural town-country rhythms are breaking down: northern Cheshire, the Lothians, at least half of the West Riding, the Vale of Glamorgan. The map of the Green Belt shows that Hampshire was only just in time. If the proposals are not substantially confirmed regional planning as a whole in this country might as well go and pack its bags. If they are confirmed the way is clear for a dozen other counties to go and do likewise, and as soon as possible.

There is a double reason for this haste. The rapidity of urban growth is the obvious one, but the other came to light slyly in the summary of objections tendered by Portsmouth at the public inquiry. This suggested that the green belt proposals should be suspended until the local government Boundary Commission has announced its findings on the Portsmouth area (Portsmouth having gone to them recently with a request for another large slice of rural cake). This Commission has been sitting all over the country, and there is no way of telling what it will recommend, but if it suggests that the County Boroughs take in more land from the Counties-which heaven forbidthere is nothing on earth which will prevent that land being built on if it is not already scheduled as green belt (a determined council and its lawyers could probably build on it, green belt and all, but at least the business would have to come out in the open). There may only be a few months left; if the counties affected would put in the time and trouble to designate equivalent green belts the nation as a whole would be in their debt. It is already in debt to Hampshire for its courage in making these proposals in the first place and then for its energy and enthusiasm in carrying them through. Perhaps for the first time a county planning office is living up to the positive and comprehensive spirit in which the planning machinery was originally conceived.



Ancient and modern behind a garden wall—a view from Holland Walk that epitomises the skill with which the architects have tackled not only the problem of mating new work to old Holland House, but also of maintaining and extending the enclosed garden character of the Holland Park site.



EOSTBE AT EOLLAND PARE, LONDON

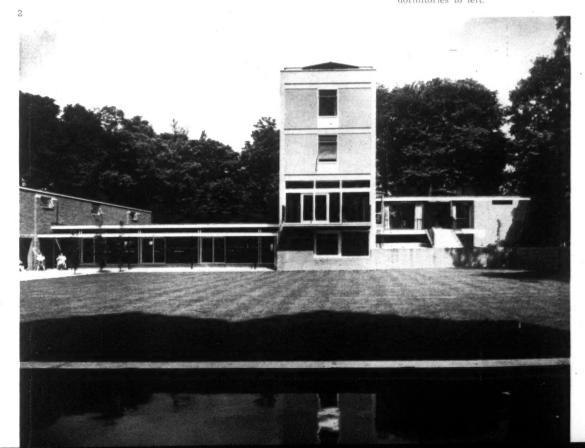
ARCHITECTS

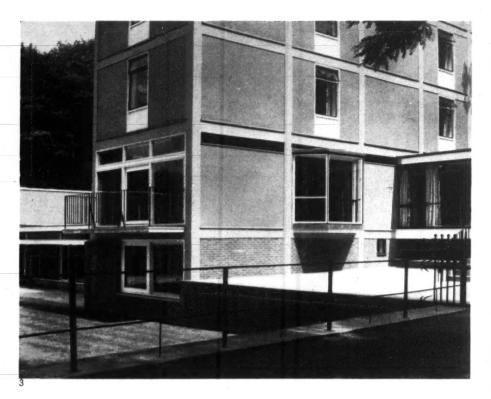
SIR HUGH CASSON AND NEVILLE CONDER

The new buildings and the surviving wing of old Holland House together make a hostel accommodating 200 persons, commissioned by the Youth Hostels Association as their King George VI Memorial Hostel. The old work was in a poor condition structurally, and the new plan bears little relation to the old layout, though one ground-floor room survives in its original form. The two ends of this wing were completely rebuilt, under the guidance of the L.C.C.'s Historic Buildings section, to stabilize the long walls.

1, the architects' drawing of the north elevation, showing the high and low dormitory blocks, and the end elevation of the surviving east wing of old Holland House.

2, the new buildings seen across the courtyard: in the centre, the gable wall of the high dormitory block, with the entrance block to the right, dining block and two-storey dormitories to left.





3, courtyard end of the high dormitory block, showing common-room windows at ground and first-floor levels, and the depth to which the court has been excavated on this side.

4. entrance block and steps, with underpass to service court.







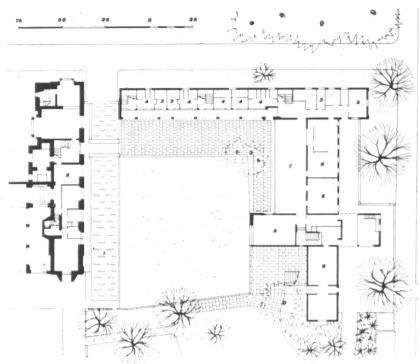
The new work does not touch the old wing, being separated from it by a reflector canal, and it has been designed to involve the least disturbance to the existing landscape of Holland Park. The buildings form a court, in the collegiate tradition, and have been grouped so that their heights can be arranged in such a way as to keep the old wing as the visual dominant of the composition—an intention which has been furthered by sinking the court and keeping most of the new work as low as possible.

Thus the two-storey dormitory wing on the north boundary has the colour and—when viewed from outside—the height of a garden wall, the flat-roofed dining block and walls to the service court continue this walled-garden theme, which is in keeping with the general nature of the site (there are terraced gardens and an orangery on the other side of the old wing), while the main exterior materials used in them, and for the entrance-block, echo the older structures by being two-inch red brick.

The five-storey block of dormitories and common rooms, etc., which presents its narrow end to the court-yard on the south-east, has a reinforced concrete frame, and is stucco-faced for contrast, painted two shades of

5, the entrance/reception area, seen from the central hall of the high dormitory block.
6, the lower foyer, at courtyard level, with door to covered cloister on right.





HOSTEL AT HOLLAND PARK, LONDON

ground floor plan



7, the surviving wing of old Holland House after restoration. 8, outer wall of the two-storey dor-

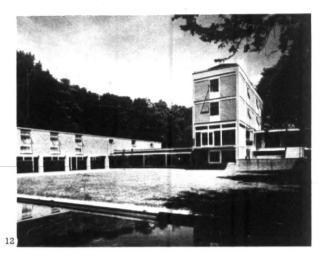
8, outer wall of the two-storey dormitory block on the north side of the court, treated as a 'garden wall' in scale with similar structures in the park. The small strip windows near ground level on this side are just below the ceilings of the service rooms on the courtyard side (see 11, over page).











9, dining room, with servery in far corner.
10, wash-up area of kitchen, with dining room beyond.
11, interior of dormitory in two-storey block.

12, diagonal view across the courtyard, with canal in foreground.
13, north-eastern corner of courtyard, with diningroom windows on right, dormitory block at back.

greyish green. The excavation of the court has made it possible to site this block low enough for it to be sensed as little more than three storeys, to prevent it competing visually with the old—the fifth storey, which contains the warden's flat, is considerably set back, and barely visible in some views.

Internal finishes and services are simple and economical, as is normal for youth hostels, and considerable attention has been given to external landscaping, planting and the manipulation of levels. In this connection it is worth noting that the fuel-feed pipe for the oil-fired heating boiler is taken to a delivery point outside the park proper, so that tankers do not have to enter.



14. the rebuilt northern end of the old building; the gap between it and the first of the new buildings on its left corresponds to the position of the canal, and is the viewpoint for 17, below.

and is the viewpoint for 17, below. 15, looking down the paved area on the north side of the courtyard from the dining room, with dormitory block on right. The bridge over the canal can be seen in line with the second arch of the old building.





HOSTEL AT HOLLAND PARK, LONDON

16, general view of the whole group of buildings from the approach path, showing how the high dormitory block reads as much less than its five storeys, although, in this view, the warden's flat on the top floor can be seen

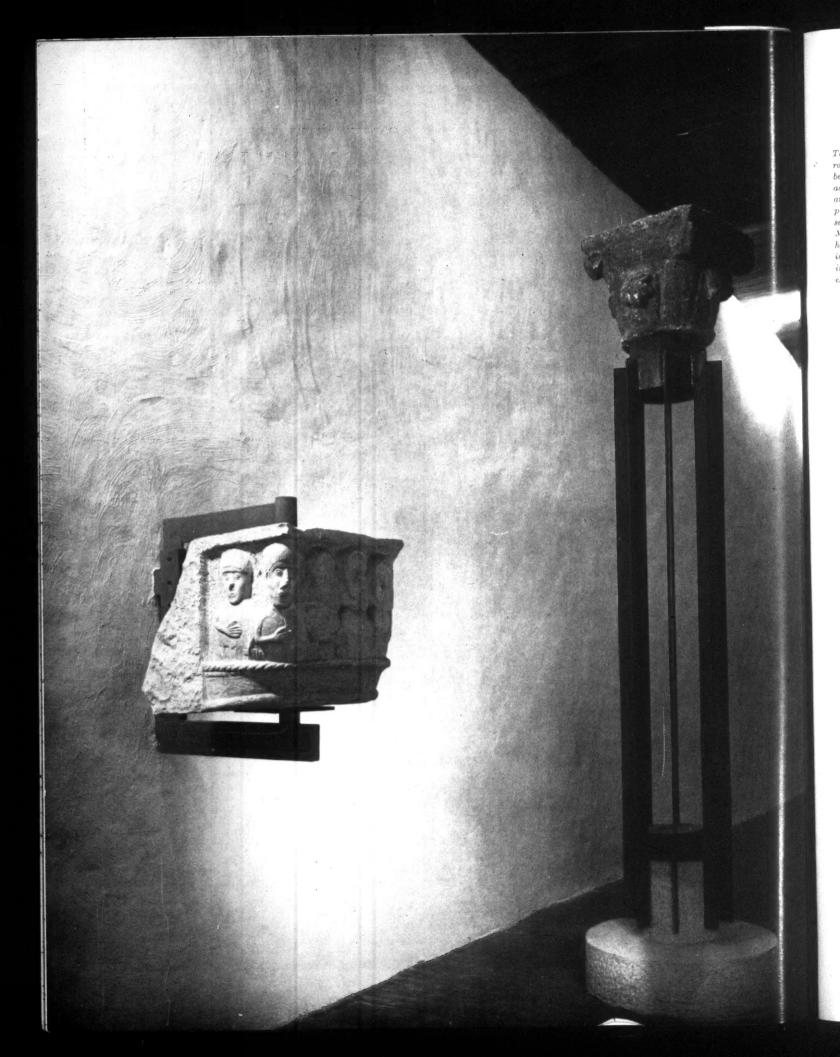
on the top floor can be seen.

17, view down the canal from the public path flanking the north side of the hostel group, showing the access bridge and restored east face of old Holland House.





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The museum has ceased to be the crowded trophy room of the culture hunt; the object on view is being liberated so that its visual impact may be as direct and as forceful as possible. This changed and vigorous attitude towards museum design was pioneered in Italy and is clearly apparent in the section at the XIth Triennale di Milano devoted to Museum Display in which the two stone forms have been isolated on metal supports which have, in terms of this century, a sculptural quality in their own right. Further illustrations of this exhibit appear on p.247

Michael Brawne

OBJECT ON VIEW

The museum, like the picture gallery,* is a medium of visual communication; in the main, though by no means exclusively, between the past and the present. All other museum functions—storage, preservation, research—are subservient to this basic task. Like the cinema or television, the museum is also a mass medium if by mass one means, irrespective of actual numbers, an audience with no specialized knowledge or exclusive interest. Unlike the cinema or television though, the museum does not deal with reproductions but with the artifact itself. It is this sense of immediacy, this direct relation between object and observer, which all museum display must exploit and all museum architecture must make possible.

It was the French National Convention which by a decree of August 30th, 1792, made museums the property of the community and so, as it were, officially established them as a mass medium. This official revolution had been preceded less formally and perhaps more realistically by the opening of the British Museum in Old Montague House in 1759, following Sir Hans Sloane's bequest. Until then the deliberate acquisition of the rare, the curious and the pleasing was the most vaunted form of private conspicuous consumption. It thereafter became very largely—despite a Gulbenkian or a Mellon—a matter of national or municipal prestige. In both instances it was necessary to display the accumulated treasury to the full rather than to communicate the meaning of the object. The emphasis was on wealth, not on communication.

The sense of immediacy must be made apparent through the display. It provides that form of communication which only the museum can give and which is, in fact, its real

^{*} See the same author's article under the title 'The Picture Wall': A.R. May, 1959.

justification. Only in this way can it compete with the photograph or the film. Yet little museum display has been organized with that aim in view. The legacy of crowded riches is still too strong.

Recent attempts at creating a close relation between viewer and object have led to the isolation of the object in space: it is articulated as much as possible from its support, its mounting, its protective cover, so that it may become a free and dominant entity. The best of these attempts have been startlingly successful. Most have occurred in Italy and have been the work of Scarpa, Albini and the BBPR Studio. These have, both in their new work and their reconstructions, set the works of art amid a sparse and powerful architecture. This method need not, of course, be confined to art collections.

The isolation of the object in no way presupposes a negative attitude towards the architectural setting. On the contrary, having articulated the display from its surroundings, it becomes all the more necessary and possible to provide an architecture which will be as positive, as much a part of the communication, as the exhibits themselves. For it is the complete museum environment which, after all, makes an impact on the visitor. Some aspects of it, like the courtesy of museum guards or the food in the restaurant, are outside the architect's control. Most others, however, are not.

It is control, the deliberate manipulation of the object's setting, which characterizes the museum. A row of eighteenth-century houses on a London street is not a museum. The deliberate preservation of them and their furnishing with eighteenth-century objects so as to show some aspects of eighteenthcentury life, would, on the other hand, make them into a museum. The emphasis, even in this rather obvious example, is in the intention of these houses to display in order to communicate. The more erudite the preservation, the more correct the reconstruction, the more does it acquire the characteristics of the museum. One cannot be fooled by the period rooms of almost any museum or a complete reconstruction like the 'Old Town' in Aarhus or Colonial Williamsburg into believing that one has stepped back into the past. Perhaps it would be as well not to try quite so hard.

The period room, of course, neatly illustrates one of the dilemmas of museum display, and thus of museum architecture. Should objects which are functionally related, like the furniture of a room or the fauna and flora of a particular ecology, be shown together or should they be seen grouped by classes, chairs arranged historically, let us say, butterflies by species? Not that these are the only two alternatives. It may, for example, be equally instructive to juxtapose a butterfly and a Limoges enamel. There are, evidently, no rules and no criteria by which to judge correctness. It depends entirely on what is to be communicated.

It is this which, of course, makes museum design so complex. Put at its simplest and most extreme, there are two choices: a large indeterminate space suitable for virtually any arrangement and a series of spaces designed with specific arrangements in mind. The difficulty as far as the first choice is con-

cerned is that a museum may want to show anything from a ship to a jewel. The economics of designing for the largest likely exhibit will make a rigorous application of the principle difficult, particularly as a good deal of additional internal organization will be needed to create some relation in scale between the exhibit and the setting. The problem as far as the second choice is concerned is that it may be difficult to rearrange the museum at a later date within the previously defined volumes. And every age tends to reinterpret the past in a new way and to alter its museums not only in the actual methods of display but also in the emphasis it may give to particular aspects of its collection. The frequent compromise of this dilemma—a dilemma by no means peculiar to museums—is to have some rooms large and some small. There may, as in Yamasaki's design for an addition to the Detroit Museum of Fine Arts, be a kind of emotional justification for having a great space, in that case two courts each 200 feet by 160 feet, yet it is doubtful whether the grouping of sculpture within those courts merely because they are large objects will always be meaningful. Display by size seems as unhelpful as the arrangement of books on shelves by format. This is particularly true of museum exhibits since the eye needs the variety given by near and distant vision.

The process of viewing is basic to all museum arrangement and far too little considered by most curators who are interested in the object in its historical or scientific sense rather than in its communication to the public. The principles of display on the other hand are on the whole unrelated to the

1, a demonstration of glass blowing at the Corning Glass Center, Corning, N.Y., designed by Harrison and Abramowitz. Museum going may encompass many experiences and museum design must always be aware of the likely range.



object; they apply as much to stuffed giraffes as to

totem poles.

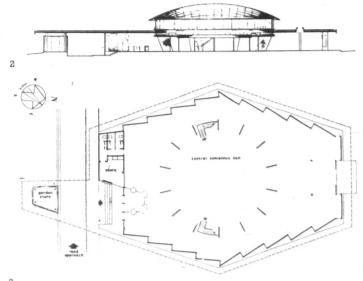
One of the highly important considerations is that vision is limited to a relatively restricted cone but that within this cone the eye, unlike the camera, has 2 very great focal depth. Giraffes and totem poles, to be seen in their entirety, need therefore not only headroom but distance. On the other hand it will be difficult to concentrate on viewing them if within this distance there are a large number of objects competing for attention. The conflict will after a while be felt as a stress. There is no problem in seeing a sculpture across a lawn because there is no competition between the two. This will be especially true if the lawn is in shade and the sculpture in sunlight since the eye is drawn towards the brightest area in view. There was, however, considerable difficulty in seeing exhibits in the American pavilion at Brussels, to take an extreme example, because the competition between objects in view simultaneously was far too great. To make concentration on viewing easier the field 3 of vision has to be either constricted still further or the number of objects within it reduced. In either case seeing will be easier.

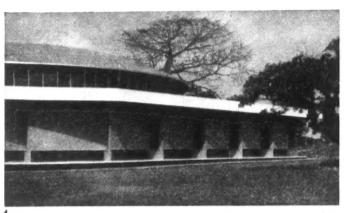
Both methods, separately or together, have been used in some of the successful museum arrangements. Museums have been laid out so that only part of the space is visible at a time and exhibits become a series of related groups which are seen sequentially. There has also been a general tendency to display only part of the collection and to make the rest available to students. The percentage of storage area has continually increased and may in some cases be equal to the display space. Exhibits are often stored on sliding racks or similar space-saving devices. Such a division of the collection makes it, of course, simpler for the museum to perform its different tasks more

effectively.

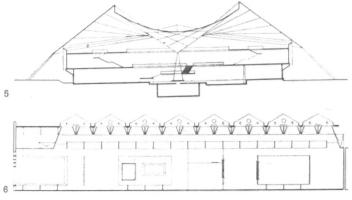
The articulation of the space by screens, walls or other visual barriers makes it all the more important that the objects as seen in sequence have some meaning and that the spatial punctuation is related to that of the exhibits. The great skill of some of the recent designs has been in just this placing of objects in progression with controlled marginal comments, as it were, by others seen through openings or partly hidden around corners or remembered afresh by a deliberately devised association of ideas. Many of the devices of the cinema, which is also very much concerned with sequential viewing, are in fact applicable to the museum. The stimulus given by the movement from a close up to a long distance view, let us say, can be created as much with a moving observer and a fixed object as with a fixed observer and a moving representation.

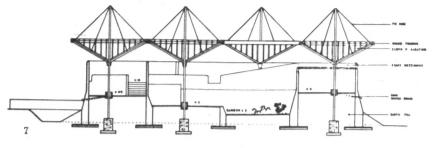
Lighting obviously plays a very important role in such an arrangement. Most museum exhibits, unlike those of the picture gallery, are three-dimensional. 5 They need the sort of lighting which will make their depth apparent. This means that the bulk of the light has to be direct with only some of it reflected to make details visible, to lessen the contrast between highlight and deep shadow. It is the sort of lighting principle which a photographer will use as much for an architectural as for a fashion model. It is, however, 6



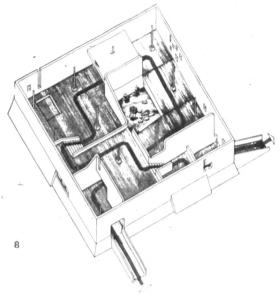


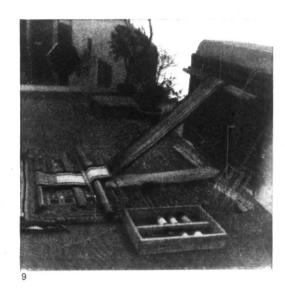
The drama of the circular space—the feeling of control when at its centre-may be apparent in the Commonwealth Institute in London. now being built to the design of Robert Matthew and Johnson-Marshall; the visitor stands on a platform at the centre immediately after entering and chooses from there the exhibit he wants to see, 5. The names of the countries will hang like banners at the edge of the galleries. When the centre is itself an exhibition area as in the Museum at Accra by Drake and Lasdun, 2, 3 and 4, the display tends to destroy the form of the building. This is particularly true when there has been an attempt to screen objects so as to lessen the distraction caused by a large number of exhibits simultaneously on view. 6, the lighting of the gallery which forms part of the Commonwealth Institute is an interesting example of a flexible arrangement of both artificial and natural lighting depending on the nature of the exhibit; within each deep coffer the lighting can be manipulated, or excluded by a blackout blind.





Charles Correa's imaginative pavilion for handloom fabrics at Delhi places brilliantly coloured cloth against rough earth walls. White and gold saris hang in the dark covered passages of the lower portion, magenta, red and orange fabrics in the shade of a canopy of cotton and plastic stretched over dark wood framing, 7. The circular route, 8, pivots about an open garden, 9, seen from a number of levels. Space and exhibition come together to form a complete museum experience.





difficult to re-create within the museum the paraphernalia of spots, floods and reflectors which a photographer uses in the studio. Le Corbusier has come nearest to it at Ahmedabad and Tokyo. The usual problem is to provide this lighting without making the illumination more important than the exhibits. At Tokyo Le Corbusier has provided a special gallery to take the equipment, 32, 34. Often it is within a suspended ceiling or part of the mounting or cabinet of the exhibit. The trend is in fact towards providing specialized lighting for each object. It is now possible to take this trend to its extreme and localize the illumination to such an extent that each display can be a bright glowing object in a virtually dark room, 11. This technique is most applicable where, as in the case of jewellery or gold embroidered vestments or certain rock samples, the luminous quality of the material can be dramatized by such lighting.

Not all lighting need be designed to enhance the three-dimensional qualities of the museum exhibits. Special conditions demand their own imaginative treatment. The back-lit stained glass in the Gothic section of the Victoria and Albert Museum was an obvious case for such specialized illumination. More frequently, however, the lighting design is forced into a pattern where it is to deal with a wide variety of situations. Whether such a highly flexible and workable system has yet been evolved is debatable. The scheme now being designed by the architects of the Commonwealth Institute and the Building Research Station, 5 and 6, may provean extremely interesting experiment. It will be some time, however,

before it can be tested in use.

Lighting will in many cases be made easier if the display is not enclosed in glass cabinets. These are often thought necessary to safeguard the exhibits from the public, although less apparent protection can frequently be devised, as in the Royal Mint Cabinet of the Historical Museum in Stockholm, 21. More often, however, cabinets are merely a shield against dust. Cleaned air may thus be as important to the communication, as to the storage function of the museum.

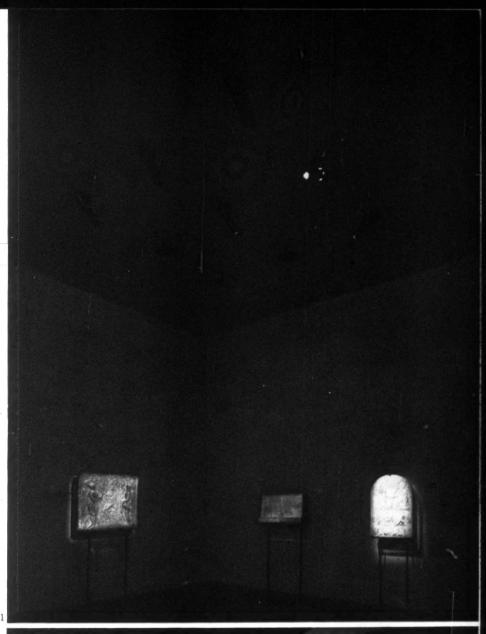
A common air cleaning system removes pollution by depositing it on electrostatic precipitators. If their field becomes too strong in an attempt to reduce running costs, ozone may be given off. This is a destructive oxidizing agent and such systems should, therefore, not be employed. The heating and ventilation plant must be capable of maintaining constant temperature and humidity conditions for rapid changes, particularly of humidity, may seriously damage certain materials. The desirable limit is between 50 per cent and 65 per cent relative humidity with a dry bulb temperature of 65°F. These relatively stringent conditions do not apply to all the objects found in museums; they are particularly critical for wood, especially marquetry, for canvas, paper, paint, for corrosive metals, for botanical and zoological specimens, for clothes, tapestry and similar perishable organic substances.

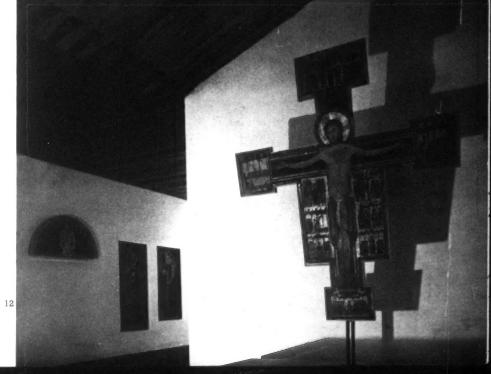
A good many items normally kept within a museum can, in fact, also be shown out of doors, either under

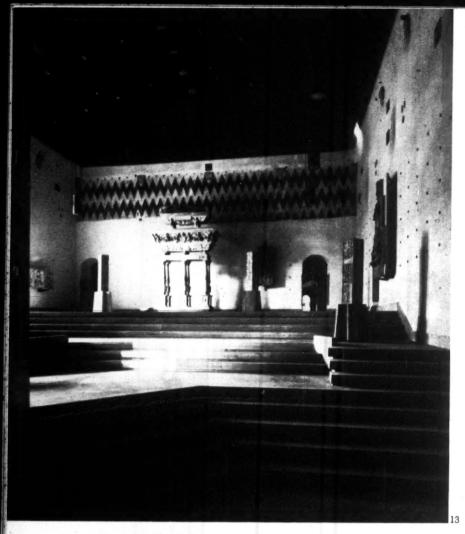
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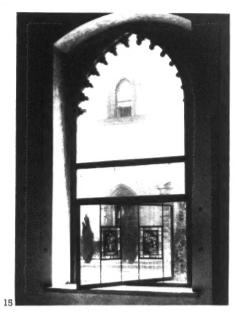
10, 11, 12 (also page 242) the Museums Exhibition of the XIth Triennale at Milan designed by a team of architects, curators and a painter provided, with very simple means, a varied setting. The fifteenth century Bodhisavatta, 10, is shielded and emphasized by a screen, itself reminiscent of an oriental scroll; bas-relief sculpture glores in a darkened room lit by spotlights on the ceiling, each projecting a beam of light shaped to illuminate the exhibit and nothing else, 11; a thirteenth-century crucifix stands, illuminated from below, against a white church-like wall, 12. The design accepts that the museum has uprooted the object from its setting and it therefore turns that individuality and isolation into a visual asset. If the nineteenth-century museum adopted the methods of the department store, that of the twentieth century seems to follow the display technique of the boutique.











13, 14, 15 and 16, the conversion of the Castello Sforzesco in Milan by BBPR (Belgiojoso, Peresutti and Rogers) is among the great recent Italian contributions to museum design. It clearly demonstrates that a vigorous display makes possible a new and enhanced appreciation of the exhibits. Both the Scarlioni Room, 13, seen from the steps to Michelangelo's Pieta Rondanini, and the wall next to the thirteenthcentury carving of Christ, 16, incorporate cast bronze pegs to take rerought iron brackets as part of the deliberate pattern of the room. The twelve tapestries representing each month of the year are hung as in a triumphal procession down the long Cancellaria, 14, and the bright brass trestles rest on shaped blocks of marble rising out of the floor. Though the stained glass, 15, is part of a window, it is still obviously in a museum, in a consciously manipulated setting.

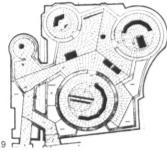




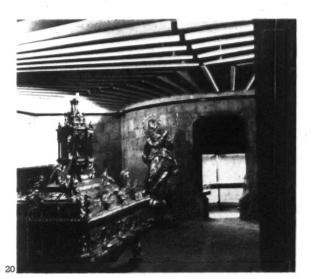
OBJECT ON VIEW

17 and 18, the town museum of Ulm is in three converted seventeenth-century houses. The arrangement has a simplicity and sparseness which is the result of a great deal of effort; nothing could be more deliberate than the relation of figure and shield under the vaulted ceiling.

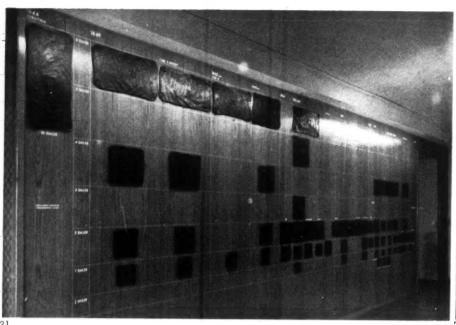
19, 20, Franco Albini's Mycenae-like Treasury of San Lorenzo in Genoa is built around a small number of unchanging exhibits and is thus fully justified in its use of complex enclosures related to specific objects. A full description appeared in AR March, 1957.









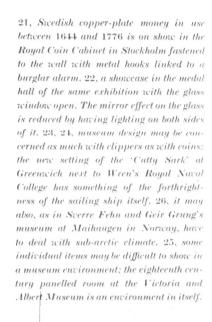




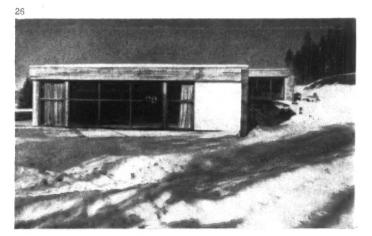


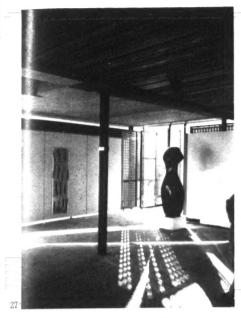












27, 28, 29 and 31, the work of Carlo Scarpa has been extremely influential in museum design. Both the general arrangement and the minutest detail are given the same scrutiny and are each developed in relation to the objects to be displayed. The Venezuelan Pavilion, 27, in the wooded setting of the Venice Biennale, has with its latticed doors and seemingly unenclosed spaces the right atmosphere for a summer exhibit. The positioning of the plaster casts down a narrowing room at the Canova Museum in Possagno, 28, and of a crucifix in the museum at Palermo, 29, is as considered as the metal zeork of their supports. Groups of exhibits are isolated and thus emphasized by the saw-tooth wood panelling and the two level shelves of the Chinese Art Exhibition at the Doge's Palace, 31, 30, Pietro Belluschi's addition to the museum at Portland, Oregon, is like a sculptor's studio and captures some of its scale and delight.





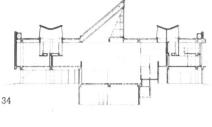




OBJECT ON VIEW







32, 34, the National Museum of Western Art in Tokyo, based on a design by Le Corbusier, makes only too clear that the architect's responsibility cannot end with the design of the enclosure whose section is seen in 34. The mounting of the sculpture and its placing in space are as important as the drama of the skylight. Each is part of the total museum environment, 33, 35 and 36, the new wing of the Zurich Museum of Fine Arts by the Pfister brothers is among the most successful designs for a highly flexible layout divided by movable partitions. The deceptive simplicity of the exhibition hall, 33, is made possible by an intricate system of ducts, cables and acrylic louvres occupying the space between the glass roof and the visible ceiling, 36.







continued from page 246]

cover or completely in the open. This provides a new and visually stimulating setting and may often give better viewing conditions, particularly in terms of space. It is a pity, for example, that the Tate is not able to display some of its sculpture in the open, like the Museum of Modern Art in New York, 37, instead of within its unsympathetically vast central hall. Outdoor display has to be considered as architecturally as that indoors. It has also to be related to the indoor area of the museum so that the two function together and the transition between them is devised as effortlessly as, for example, in Scarpa's Venezuelan Pavilion at Venice, 27. In this connection half open spaces, like Rietveld's brilliant construction at Arnhem, may be especially appropriate.

Such a transition is relatively easy in a pavilion used only during the summer. It becomes more difficult in the ordinary museum, though there is no reason, of course, why there should not be some seasonal changes in museum layout, why some pieces should not be taken out in the summer like plants from a conservatory. In either case the outdoor display may, by a controlled view of it, provide that marginal comment in the indoor sequence of viewing which is both a visual rest and an additional piece of information. The same holds true in the reverse case of looking in from the outside. It is the sort of spatial organization suggested by many a quattrocento painting: indoors the Archangel Gabriel presents the Virgin with an arum lily in the Annunciation; outdoors, through an opening in the cloister, an angel hovers in the garden. There is no visual conflict between the two scenes, the eye moves from one to the other. Studio BBPR have used just such a compositional group in their Castello Sforzcesco.

Outdoor display may also be a kind of temporary extension of the museum into the community. The Munson-Williams-Proctor Institute at Utica, N.Y., for whom Phillip Johnson is now building a new home, has an annual open-air show which draws a large attendance. Museum design—building as well as layout—should make such arrangements possible. There are other kinds of extension, like the travelling exhibit of the Warsaw Museum or the so-called 'Artmobile' trailer of the Virginia Museum of Fine Arts, which have, however, fewer architectural impli-

cations except in so far as they may lessen the need for a large permanent display.

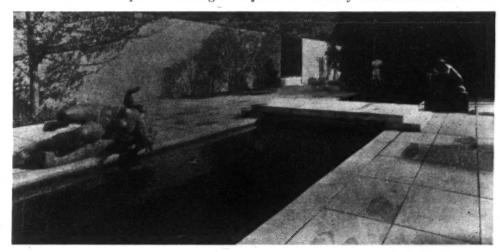
The extension of the museum into the activities of the community may have considerably greater repercussions on museum planning than any other consideration. Not all communication need, after all, take the relatively passive form of viewing a collection. This is as true of natural history as of art, though most experiments in participation have taken place at art museums. It has probably been thought easier to arrange for school children to model clay in the museum workshop than to dissect frogs in the museum laboratory. The Museum of Modern Art in Sao Paulo was designed by Lino Bo Bardi with a great variety of possible activities in mind. In future other types of museum may follow a similar pattern.

museum may follow a similar pattern.

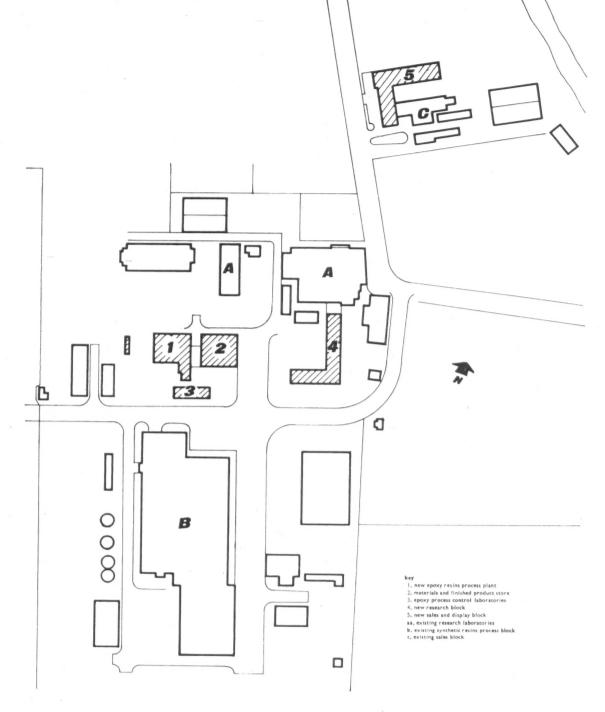
The planning of such a building will have to consider a diversity of spaces: libraries for books, magazines, gramophone records, films, slides; libraries lending works of art so that these may be appreciated in the every-day surroundings of the home; rooms for the projection of films and transparencies; workshops, laboratories and studios designed for public use; lecture and meeting rooms for talks, discussions and musical performances; restaurants indoors and out. The museum becomes part of what, for want of a less compromising phrase, can only be called a cultural centre. This is a trend fully in keeping with the new social role of the museum. It may be, what is more, its primary justification.

It has been usual to plan such cultural centres as part of open spaces, to set the buildings in parkland. Whether this divorce of the museum from the working centre of the city is always valid is open to question. It may be that in our intensely urban society there is a place for a museum which opens as much on to the public square as into the public park. The Loggia dei Lanzi Florence is, perhaps, a not unworthy precedent.

At the beginning of this year the British Treasury announced an increase in the purchasing grants of certain museums and art galleries. The increases were unspectacular yet they will make a difference. They may also, though this is a slender hope, be the beginning of a less parsimonious attitude. It is important that with the additional money available there is now not only an increase in the collections but an improvement in their presentation. The attitude, so long prevalent, of considering the museum. in Mumford's phrase, as a kind of cultural department store, fails to exploit the great impact which the immediacy of imaginative display makes possible. The great nineteenth-century museum mirrored the acquisitive society which fed it. A radically different attitude is needed toward visually communicating the meaning of objects in a society of leisured abundance.

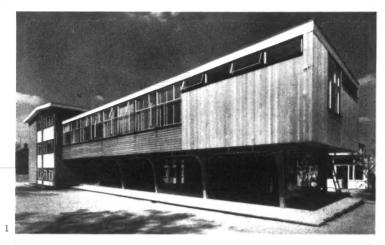


37, Phillip Johnson's sculpture garden extends the Museum of Modern Art, New York, into an outdoor room.



FACTORY EXTENSIONS AT DUXFORD

Ove Arup and Partners' first process group at Duxford, b on plan above, was illustrated in AR, March 1951, and has since become established as a text-book example of structural ingenuity and functional planning. Their new work includes another process group, equally ingeniously planned around a vertical, gravity-fed plant, and an extension to the research laboratories. At the same time, Westwood, Sons and Partners have been responsible for the design of new sales facilities located near the top of the plan above.



1, the sales block, with display space in the glazed area below.

2, a corner of the research laboratories, with new plant, store and control laboratories (far left).

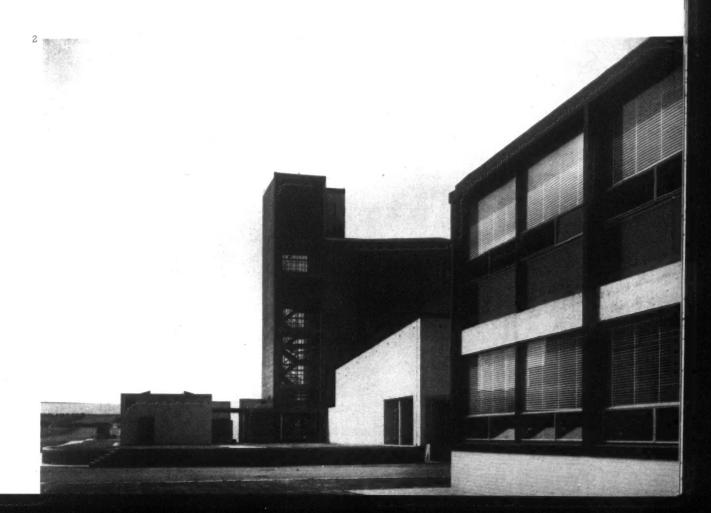
PACTORY PROFESSIONS AT DURFORD

DESIGNERS

Architectural Associate OVE ARUP AND PARTNERS

Philip Dowson

ARCHITECTS FOR SALES AND DISPLAY BLOCK: WESTWOOD SONS AND PARTNERS







FACTORY EXTENSIONS AT DUXFORD

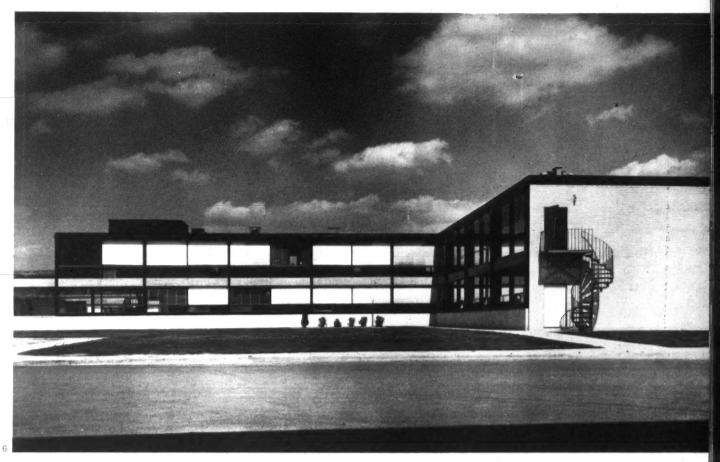


The new works comprise extensions to the sales and display block, a new block of research laboratories, and plant, storage and control laboratories for a synthetic resin process—the clients are a leading chemical concern and the Duxford factory, near Cambridge, manufactures resins for such purposes as the bonding of wooden laminates.

The sales block, 3, 4, 5, designed by Westwood Sons and Partners, is an L-shaped structure whose two wings partly conceal an older building, and partly combine with it to form a three-sided courtyard, which has been landscaped. The three-storey part of the new work, which faces the old, is of load-bearing brick construction with patent lightweight timber roof. The two-storey wing which joins this to the old building, which it also masks, is a timber structure whose upper floor, faced in western red cedar boarding, is supported on a ground floor structure consisting of laminated timber frames—alternate plies of Douglas fir and meranti bonded together with glues made by the client. This lower floor is glazed for most of its perimeter to form a showroom and enquiry area.

The research laboratories which, like the process group, are the work of Ove Arup and Partners, occupy two sides of a hollow square, and are joined by a low link block to an older laboratory block which forms the

3, end of the timber-framed wing of the new sales block, with older building behind. 4. junction of the brick and timber wings of the block showing the entrance and enquiry area, with view through to the new courtyard beyond. 5, view looking outwards from the display area, the laminated wooden beams supporting the upper floor being, themselves, part of the display of applications of the client's products.



third side-later extensions may close the square. The laboratories themselves, 6-11, are planned mostly as a series of self-contained units, each 20 feet square, and the structure is a pre-cast concrete frame at 20 foot centres, with in-situ floors. The glazing mullions in the centre of each bay are also pre-cast. Standard window units are bolted to the back of the frame, leaving all frame members external, which simplifies internal installations. Other glazing goes directly into the concrete. All exposed in-situ concrete is bush-hammered. Heating is by radiant ceiling panels, supplemented by a warm air system to make up losses due to fumecupboard extraction.



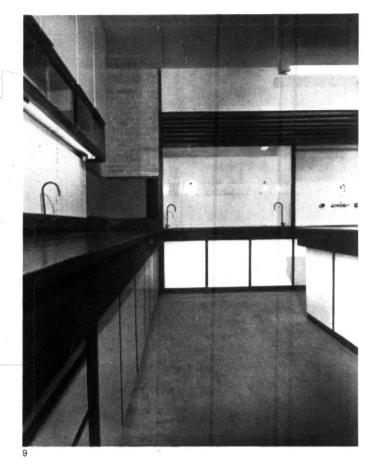
6. courtyard side of new research laboratories, with link to older laboratory block at far left.

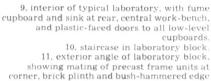
7, linking block, with entrance, between old and new

laboratories-new block on left.

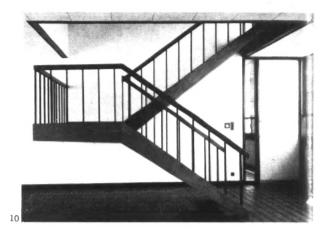
8, access corridor on first floor of new research labora-tories, as seen from the escape door visible in 6.





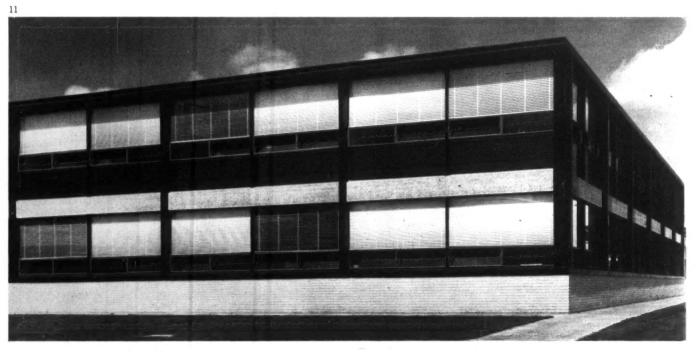


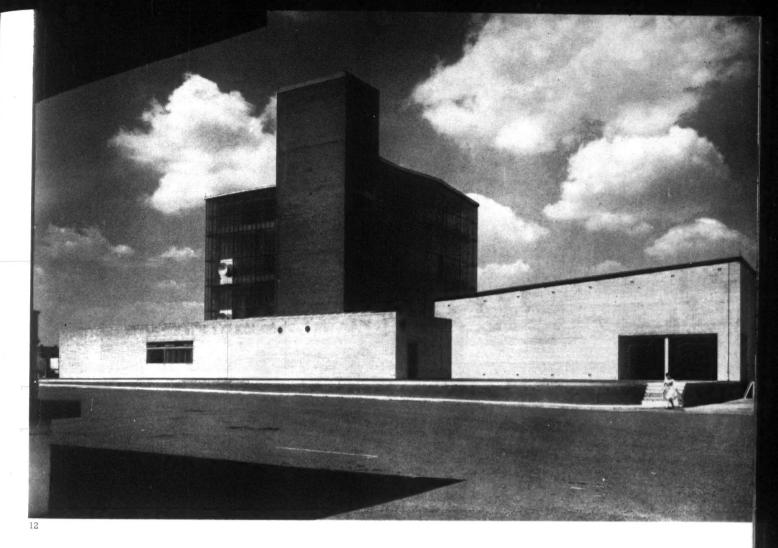
beam of in-situ floor slab.



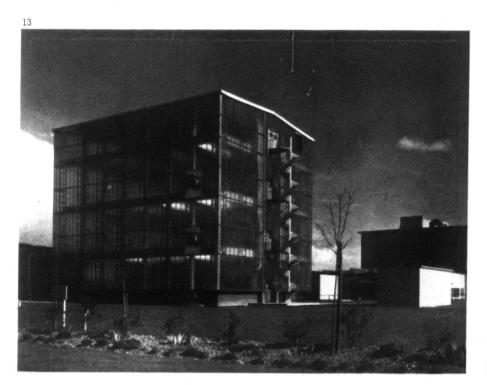
The process group, 12, consists of three main functional elements: the plant itself, a small block to house control laboratories, and a store for raw materials and finished products. The building to house the plant consists simply of a series of superimposed machinery platforms to support a gravity-fed process, platforms and frame being all of in-situ concrete. The whole block is clad in patent glazing (easily replaceable in case of fire or explosion) standing two feet clear of the frame on ladder mullions, 13, thus leaving ample space for pipes and services well away from the plant.

The storage block, 14, is a simple brick structure with a single-pitch roof carried on laminated timber beams. A covered way connects with the plant, and provision has been made for extension along the line of the roof pitch. The control laboratories, 15, also brick-built, are separated from the plant because of the fire risk. This block, too, may be extended as need arises.



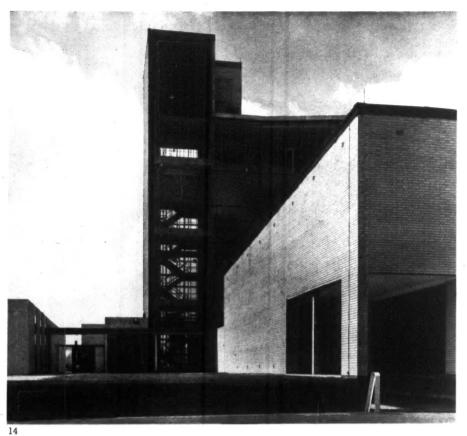


FACTORY EXTENSIONS AT DUXFORD



12, general view of process group, with store at right, and control laboratories in front of stair/lift tower of main plant.
13, the plant block seen from the other side, with laboratories, and earlier plant by same designers beyond. The extent to which the glazing of the plant block stands clear of the floor slabs is well seen in this view.





14, the storage building of the process group, with loading bay at extreme right. Behind is the stair tower of the plant proper, which carries a water-tank at its head.

15, control laboratories and main plant of process group; the new research block can be seen beyond.





Church in Stepney, London

architect: Holger Jensen

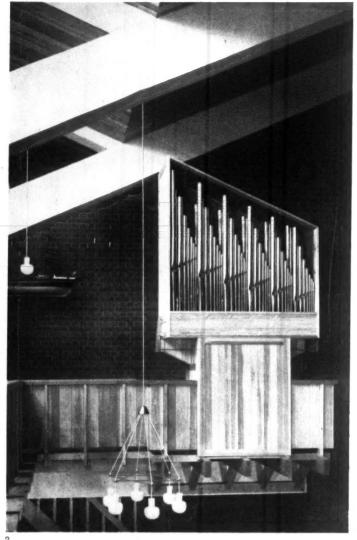
in association with Armstrong and McManus

associate-in-charge: Richard Wackerbarth

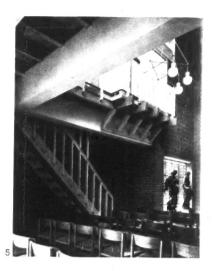
Replacing a much earlier structure. destroyed by bombing during the war. the Danish church in Stepney serves the spiritual needs of Danish sailors from ships in the Port of London. while its ancillary buildings serve their general welfare. The church proper is a tall brick box, almost square in plan, covered by a form of butterfly roof, and its interior, carried out almost entirely in fairface brick and redwood, gives London a tangible lesson in Danish detailing by a distinguished Danish architect.

1. the suspended ship models under the roof, commonly found in seafarers' churches all over Europe, are the only overtly traditional touch in the interior, yet the whole businesslike, straightforward design has a distinct flavour of the Functional Tradition about it, and even something of the functional manipulation of three-dimensional space that can be found in other nautical churches, such as St. Mary's, Whitby (AR, February, 1958).





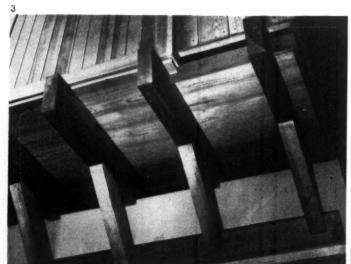
Church in Stepney, London



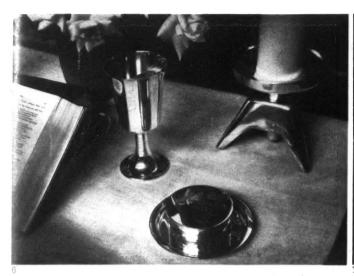
2, the organ at the end of the back-gallery; pipe-work, action and organ case were made in Denmark to a collaborative design by the architect and the organ builders, Frobenius of Copenhagen, but the wood is a similar European redwood to that used in the rest of the church.

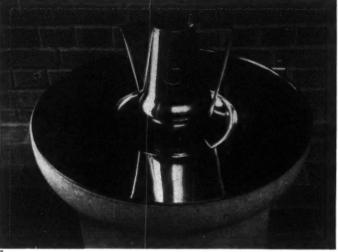
3 and 4, bracketing under the organ, and the organ console, with music-desk and stops. As will be seen from 5, above, the organ is bracketed completely forward of the gallery, whose edge is marked, in 4, by the line where the redwood boarding meets the brickwork, with a characteristically simple joint.

5, the southern side of the church, showing the gallery stair and the window which side-lights the altar.









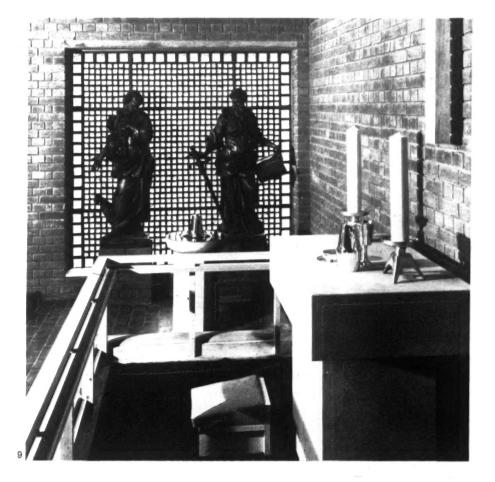
6. altar furnishings; 7. the font. The plate and other pewter-work were made in Denmark to the architect's design. The metal of the organ pipes is similar in alloy and appearance.

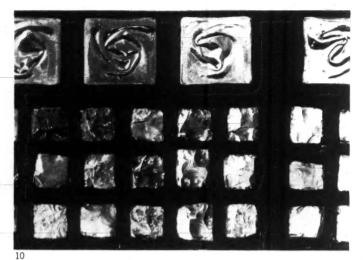
8, the altar. This, like the font, was made in England of Roman stone. The extremely simple form returns to the idea of a rude table, but without fake primitivism.

9, the sanctuary, showing the altar and

kneeler within the wooden altar-rail, the font beyond it. The lower arm of the wooden cross can be seen above the altar. The two fine baroque statues in front of the window are by Cibber, and come from the old Danish Church.







sent from Denmark by the architect. 13, the complete church and ancillary buildings, seen from Commercial Road. The stained glass window can be seen under the entrance-pergola, but the church has no door on this side, entry being from a foyer-corridor at the back. To accommodate very large congregations, folding doors can be opened between the church proper and the meeting room occupying the first two ground-floor bays of the building on the right.

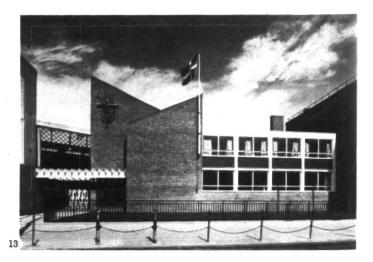
Church in Stepney, London

10, a detail of the stained glass window by Palle Bruun—the smaller glass lights are made by breaking up larger pieces (not unlike those in the top row) of clear colour, mostly yellows and reds, and the whole is then cast into wire-reinforced concrete, and carried in an iron frame. 11. general view of the sanctuary. showing the clear rise of the brick wall behind the altar. The liturgical orientation of the church is the reverse of the normal practice, so that the stained glass window behind the statues receives direct sunlight from the south for most of the day, introducing a positive element of warm lighting to supplement the overall light from the clerestory, high on the east wall facing the altar, which admits direct sun only early in the day, as in 1, page 261.

12, the larger of the two ship models, suspended under the roof. This one came from the old Danish Church; the smaller one, visible in the detail on the cover of this issue, was









Gift Room at UNESCO HQ, Paris

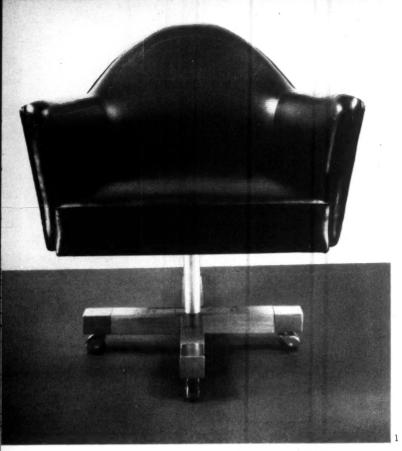
designer : Robin Day



the UNESCO Headquarters in Paris. in the sense that some member governments have given 44 complete furnished interiors for council or committee rooms, an independent group of manufacturers and other interested parties, under the aegis of the British Furniture Manufacturers' Federated Associations, have presented UNESCO, in the name of the British people, with an office for the President of the Executive Council. 1, the room, which lies in the curve between two wings of the building's Y shaped plan, is on the north side of the block, the front towards the Place de Fontenoy, looking over the Ecole Militaire to the Eiffel Tower. Like all offices on the main floors of the block, it has a ceiling that slopes up toward the window, because of

Although there is no British Room at the structure above it-here it is panelled in oak veneer with flush light-fittings. The main desk, the two low tables and the secretary's desk (not shown) are in walnut with satin chrome metal frames. The wall behind the desk is in white-painted boarding, with a mirror strip next the window, against which the natural crush curtains are drawn. The chairs, like the other movable furniture and the over-all design, are by Robin Day, and covered in red fabric, except for the swivel chair, upholstered in black leather. The carpet is grey.

> 2, looking into the back corner of the room, toward the storage units, also in walnut, and the back wall which is panelled out in golden tan leather to match the top of the desk. A painting by Ben Nicholson, the gift of the British Council, hangs on this wall.









Architects' furniture

In spite of the increasing trend to compartmentation and specialization in the design of interiors, a number of separate pieces and, occasionally, integrated suites, of first-class furniture continue to be designed in British architectural offices.

1, executive chair, from the suite of unit-designed office furniture by Brian Henderson of Yorke, Rosenberg and Mardall, which shared first prize in a recent TDA competition. Upholstered in black leather, it shares the general air of slightly larger-than-life robustness and common-sense luxury that informs the other pieces in the set.

2, a desk, from the same suite, framed in polished abura wood with black linoleum top. The whole suite

Architect-designed furniture

is to be manufactured by Bath Cabinet Makers and should be on the market in the New Year. Prices are expected to be moderate, in spite of the quality of workmanship and materials, because the whole range is built from a few basic units.

3, corner of desk, from a range of university furniture desiged by Basil Spence and Partners. The range, which includes other sizes of desk, tables, chairs, bookshelves and storage units, is notable for its sensible and elegant detailing, exemplified here by the drawer-pulls. Frames are in inch-square stove-enamelled steel tube, solid wood is guarea, the work tops in various materials.



4, single-pedestal desk from this range. Manufactured by George M. Hammer, cost should be just under £23 in its most lavishly-equipped variant.



ROYAL TOBACCO FACTORY

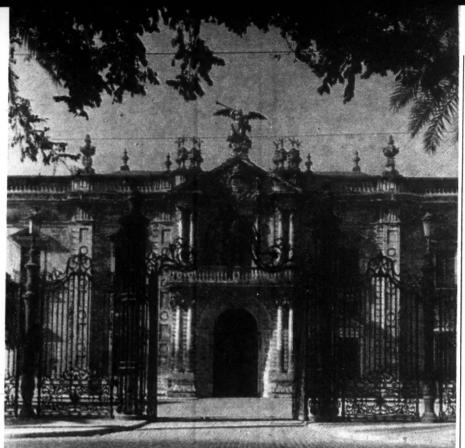
An account of the largest early industrial building in existence, completed in 1770, now being converted for university use.

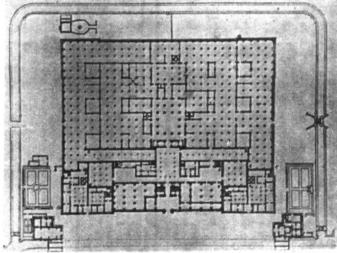
The University of Seville has moved to new quarters. The architectural significance of this transfer is that, when it is completed, one of the leading examples of eighteenth century industrial architecture will have ceased to function as such, for the University is taking over the Royal Tobacco Factory, now grown too impracticable to fulfil the purpose for which it was created. It reached its heyday in the nineteenth century when virtually the entire state tobacco monopoly was concentrated within its walls. It was, in fact, a sort of quasi-fortified township, with its own living quarters, chapel and even a prison. Formerly the Factory was completely isolated from the rest of the city, whose walls ran alongside the main façade. It was surrounded by a moat that could only be crossed by three drawbridges. In addition, there were check and control points manned by a host of guards and customs men who waged a ceaseless feud with the illicit manufacturers, tobacco smugglers, pedlars and contrabandistas

that the existence of the monopoly inevitably encouraged. More often than not they were in league with the workers inside and even with the guards themselves: Quis custodiet ipsos custodes . . .? These were the days, evoked by Prosper Merimée in 'Carmen,' when the cigarreras or cigarette girls streamed out of an evening from the Factory, dancing seguidillas and sevillanas to the strumming of guitars and the chatter of castanets. But all this belongs to the Romantic age of Washington Irving, Theophile Gauthier and David Roberts. It has long since passed away. Now the Factory is to house the Faculties of Law, Medicine, Science and Letters, as well as the University offices.

Briefly, the history of the building is as follows. The original plans were drawn up in 1725 by a military engineer called Ignacio Salas, though work on the site did not actually begin until the middle of 1728. Operations were suspended three years later, owing, it seems, to various objections having been raised against Salas's design.

The latter, however, carried out what was probably the trickiest and most important part of the project. This was to divert and canalize the river Tagarete, which ran in front of what was to be the principal façade so as to provide the Factory with an underground water supply. These preliminaries absorbed about half the total cost of the undertaking. This total has been computed at 36 million reales, roughly the equivalent of £1,500,000 at today's values. Between 1733 and 1737 there was another spell of activity under a second military engineer called Diego Bordick, only to be followed by a further gap of sixteen years. In 1750 work was resumed under a Dutch engineer, Sebastian van der Beer, who appears to have drawn up a new set of plans which he was asked to present and explain in person to King Charles III. Van der Beer remained at the head of the scheme until 1766, four years prior to its final completion. In that year he was relieved of his post, a victim of the political changes that followed the downfall of the minister Esquilache. The latter's successor, Muzquiz, dismissed with the curt phrase 'that his services were no longer needed,' so that, as a contemporary put it, 'everyone was struck dumb, seeing that he had been at the head of the enter-





1, the monumental entrance to the residential part of the factory.

plan of the factory, showing the residence of the superintendent and his assistants in front, with the main factory behind.

prise ever since its inception in 1750.'

Without going into the question of whether Salas, Bordick or Van der Beer was ultimately responsible for the design of the Factory as it exists today, there is no doubt that it was in part inspired by Juan de Herrera's Lonja or Exchange (1582–98) in the same city. The lateral façades show the same arrangement of a double row of windows, separated by a

string-course, but instead of the superimposed orders of the Lonja, the bays are divided by giant pilasters. Moreover, the main façade is enlivened by the introduction of a mezzanine, replacing Herrera's flat rectangular panels. The result is distinctly cosmopolitan and links this whole front with the type of Late Baroque building exemplified by Marquet's Post Office (1767) and Sabatini's Customs House (1769) in

René Taylor: ROYAL TOBACCO FACTORY

Madrid. Its general air of severity, however, is mitigated by a good deal of detail carried out in the local *churriguerresque* tradition.

The whole structure measures some 550 by 450 feet, not far short of the dimensions of the Escorial. As may be seen from the plan, it is divided into two parts, namely the 'palace' or residence of the Superintendent and his principal assistants and the factory proper. The residential part, with its monumental entrance, courtyard and



3, cigarreras at work in the factory.

staircase, occupies the front of the building and is clearly separated from the remainder. But it is the industrial section that is of predominant interest. This occupies about two-thirds of the total area. Outside, the extensive terraces where the tobacco leaf was dried may still be seen. The interior is organized on the basis of innumerable small spatial units or compartments about eighteen-foot square, upheld by massive supports. It consists essentially, therefore, of an aggregate of autonomous units, a singularly modern conception, and an arrangement which had the virtue of extreme flexibility in respect of the changing needs of the monopoly. These units are grouped so as to form extensive galleries, some of them as much as 400 feet long, running the whole length of the building. They are punctuated by numerous small courtyards that serve to admit light and air to the interior. All the manufacturing processes were housed in this part of the building, from the milling of the leaf, carried out by means of circular crushers, operated by teams of mules, to the packaging of the finished article. But by far the most remarkable feature of this building is the way in which it was planned, complete with its underground reservoir of water, so as to provide just the right degree of humidity and ventilation required in the various processes of tobacco manufacture. The manner in which the atmospheric conditions of the interior can be controlled should prove a boon to the University when it takes over, particularly in the broiling Sevillan summer when it is invaded by hundreds of foreign students on vacation courses.

SUISSE-ROMANDE

Although the guide-books insist that Switzerland is divided into three parts and three languages, architecturally the line is not so abrupt. Architecture cannot be contained within narrow bounds in this international age, especially in a country as small as Switzerland, where twenty-two fondue-eating cantons cling together forming Confederatio Helvetica. A desire for unity coupled with a distaste for standardization is reflected in Swiss life, philosophy, administration, politics, architecture and town planning, and this is especially true of the Suisse Romande* whose recent architecture is surveyed on the following pages.†

Three periods in the history of Switzerland are of significance to its architecture and town planning. The late middle ages brought into the fortified towns the harassed countryfolk, resulting in the familiar topping of the buildings with a further two storeys. But the industrial revolution, which created irrecoverable chaos of over-concentration in many countries, had quite the opposite effect in Switzerland; electric power and cheap communications led to industrial decentralization, saving the country from the horrors of Megalopolis. The third period of population movement came after the Second World War when, for economic reasons, the rural inhabitants became town conscious. This led to acute housing famines which were further aggravated by

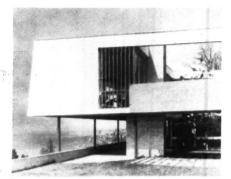


the increase in marriage and birth rates. Foresight, rent control, and new planning laws tackled the problem with common sense, the main building types being subsidized blocks of flats. Age-old problems were given new solutions; the elastic plan and the convertible house dealt with the needs of the growing family. The tactful marriage of private development, co-operative societies, and public authorities failed to produce architectural masterpieces, but saved the country from the hazards of Subtopia.

Housing estates are sufficiently singly and not as sprawl. This small and varied to be contained is well illustrated at Cologny within the landscape; single where modern villas overlook Lac houses are normally sufficiently Léman. On the whole, street elefar apart to make them read ments are strictly controlled and

^{*} Parts of Romandie, now Normandie, were gradually annexed by the Swiss, the latest, in 1815, being Geneva. The French-speaking peoples of these areas, which include the cantons of Genève, Vaud, Neuchâtel and parts of Fribourg and Valais, are referred to as Suisse Romande.

[†] A survey by Ian Nairn, of recent architecture in German Switzerland, appeared in the March AR.

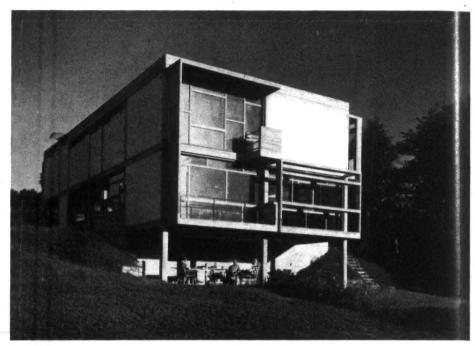


Private houses overlooking the lake at Cologny, Geneva: above, by F. Gaillard (for his own occupation); right, by P. Bussat and J. M. Lamunière, in natural surfaced reinforced concrete with painted panels. The client was Robert Jeanneret.

refined sufficiently to create satisfactory visual entities; posters, for example, are of standard size and are fixed on to tubular stands and not merely stuck on to walls; being requirements in their own right they are treated as such and annual poster competitions and exhibitions help to achieve high standards of commercial and industrial art. Architecturally, too, competitions have resulted in many young architects being responsible for big jobs, in many of which an appetite for experiment and an unselfconscious employment of steel and concrete elements in the same building have resulted in a clean and lively architecture.

The problem of the architect and the engineer coming to loggerheads is an international one, but recently the Federal architects and engineers agreed to classify their work into four categories. In the first two, which range from simple structures to residential and public buildings, the architect is in charge. In the third, which includes factories, silos and industrial buildings, the choice is left to the client, while in the last category, which includes roads, bridges and dams, the engineer is in charge. He must, however, consult the architect on choice of site and general conception.

Geneva is to Suisse Romande what Zurich is to German-speaking Switzerland. Situated at the foothills of Salève, overlooking the lake, it has attracted artists, connoisseurs of art and wealthy travellers since the days of Byron





Montage illustrating a project for six identical tall blocks of flats in Geneva. In the foreground is the fountain referred to in the article. Below, the only one of these blocks so far completed: R. Passera, architect.

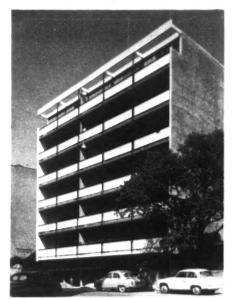


Above, flats at Geneva by A. Bordigoni, J. Gros, A. de Saussure and R. Fleury, showing prefabricated façade elements. They are part of an estate near the League of Nations building.



and Shellev. From the lakeside t e attractive city—apart from s me badly pruned treess retches horizontally with a regu-Ir roofline, broken only by the spire of the old cathedral and the exciting vertical fountain on the lake shooting up 330 feet into the air; lit up at night, it remains an outstanding work of dynamic civic design. This rich cosmo-Tolitan city is one of the headcuarters of the United Nationsthe neo-nothing-on-earth League building spoils an attractive park and of CERN* still being built. An urban estate near the League of Nations building is fully landscaped, and despite some crude pieces of architecture is beginning to look stimulating—it is normal practice in Geneva to put large blocks of flats either at the edge of, or in, a park.

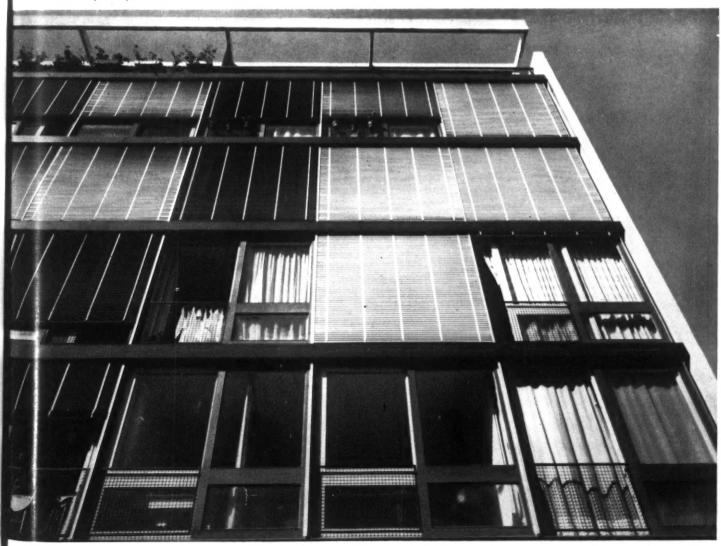
*Centre Européenne pour la Recherche Nucleaire



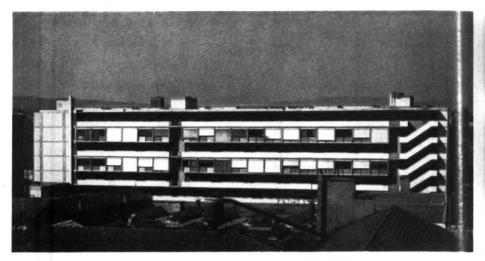
Flats in the rue Prévost-Martin, Geneva, by M. Cailler and A. Gaillard: street façade with shops and garage-entrance on ground floor; below, the opposite façade.



Above, flats at Malagnou-Cité, by Georges Addor, with staggered balconies designed to increase privacy.

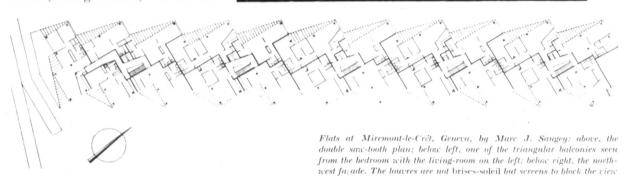


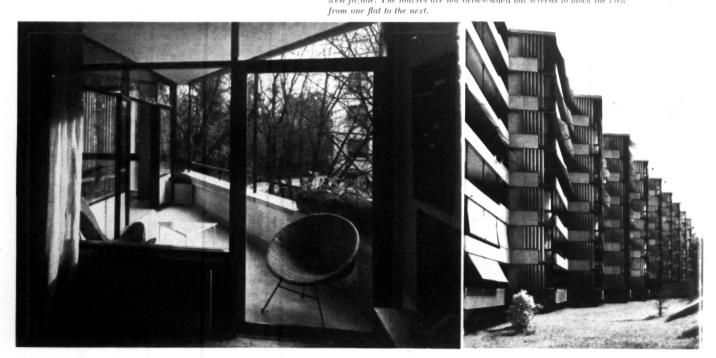
It is not quite true to say, as some do, that curtain walling came to Switzerland through Marc Saugey, the outstanding Geneva architect: Le Corbusier's Maison Clarté, an early building much publicized owing to a famous murder that took place there, was in fact, the first. Saugey, however, has carried the idea further and adapted the curtain wall to meet European requirements. He was first hailed as urbaniste proper with his Malagnou-Cité; which includes shops, post office, and gardens. Perhaps the most influential architect of Suisse Romande, he has designed three cinemas, all of them getting away from the camera-box concept. His two latest buildings are of special significance. Though different in function and character, these both express typically Swiss concepts. One is Gare-Centre, a complex unity of shops, flats, offices, filling station, cinema and





Project for a multi-level housing development in Geneva by P. Bussat and J. M. Lamunière. Above, the portion of the scheme already built.







Interior of one of Marc J. Saugey's three recent inemas: Le Star, at Gare-Centre, Geneva.

garage. This mixing of uses under the same roof is an interesting approach essential for central area development.

The other Saugey building, Miremont-le-Crêt, is a residential neighbourhood, housing also a few small-scale shops. This is an outstanding piece of architecture. It is fitted on to a long, narrow, difficult site and vigorously expresses its ingenious saw-tooth plan. It is also notable for its colourful entrance hall.

Other towns of Suisse Romande do not display such great virtuosity, partly because of their size and partly for geographical reasons. Lausanne has some interesting buildings, but steep slopes make development difficult. Vetter's project for the city centre deserves a special mention. It includes three-level traffic, a twenty-storey town hall, high offices and gardens. La Chauxde-Fonds, Corb's home town, Paverne and others all have some buildings of interest. However the Swiss have their share of disappointments. The Grand-Théâtre with full Wagnerian pomp, which was burnt out during a rehearsal, leaving only the sculpturesque façade, is still not rebuilt and is under constant controversy between those who are fighting for a new one and those in favour of restoration.

The fashionable description of Switzerland as clean and dull with well detailed buildings must be revised. Clean it certainly is. Good detailing is to be relied on. The accusation of dullness, however, must be considered in the right perspective. Up to the nineteen-fifties, it is true, most develop-

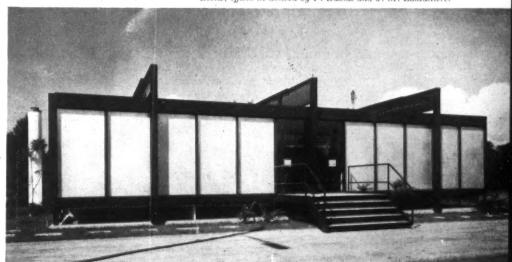


Above, a multi-purpose building, the Gare-Centre, Geneva, by Marc J. Saugey. It has shops and a garage below, offices on the first and second floors and a walk-way on the third with flats above.



Left, school at Grand-Sacounex, Geneva, by G. Brera and P. Waltenspuhl: gymnasium with cantilevered roof forming a covered planground.

Below, offices in Geneva by P. Bussat and J. M. Lamunière.



ment in Suisse Romande was of a mediocre kind except for Maillart's bridges but recent contributions, although not as lively as in some places like Brazil, Chandigarh or México (where exceptional men are working under exceptional circumstances) are certainly as varied and imaginative as in Italy or Scandinavia. The reason can perhaps be found in the central position that Switzerland enjoys in Europe, giving the architeets a chance to visit the best European buildings. For although articles and photographs can display certain trends, they can never remain as substitutes for the visual experience, or the fourth dimension.

It is not really possible to sumup in a few words for any country its architectural ideals of today; but perhaps the nearest one can get for Switzerland is the Mumford ideal: 'the orderly breakup of . . . unwieldy structures, and the reconstruction of their power and culture on a federal basis . . . one of the major tasks of urbanism.'





Left, affects by Gearges Addor in the route de Lyen, Geneva: top, street fazade of the two-storey building with vanopied entrance in the distance: buttom, reception fager showing the constrution of the building on pilots.

B-low, gymnaxium by P. Waltenspuhl, designed to be dismantled at a later date and re-exceled on another site,





Factory at Payerne, by P. Waltenspubbelow, general view; left, detail shown ashestors elabling and system of doubobesion





1, aerial view of the model, seen from the western, or residential end, with hostel blocks on either side of the lake in the foreground. The formal planting beyond leads back to the masque, and has the students' union to its left. The campus proper is seen in the top left-hand corner.

UDIVERSITY OF THE PANSAR

architects

associate project architect RAGLAN SQUIRE AND PARTNERS

William Whitfield

 a sketch made on the site by the associate architect for the university project, showing the only existing landscape features—the canal with its bridges, adjacent irrigated land and tree-belts.

The University of the Panjab is the oldest modern University in Pakistan, having been founded in 1882, and now occupies a number of buildings in the commercial part of Lahore. This environment is unpropitions to the conduct and development of academic life, and the University is to move to a new site, occupying some 2,300 acres outside the city where a new campus is to be created. The master-plan for this development was commissioned under the Colombo Plan Aid Programme, and covers not only the site layout, but the outline planning and design of the buildings.

The site lies outside a proposed ring road, part of



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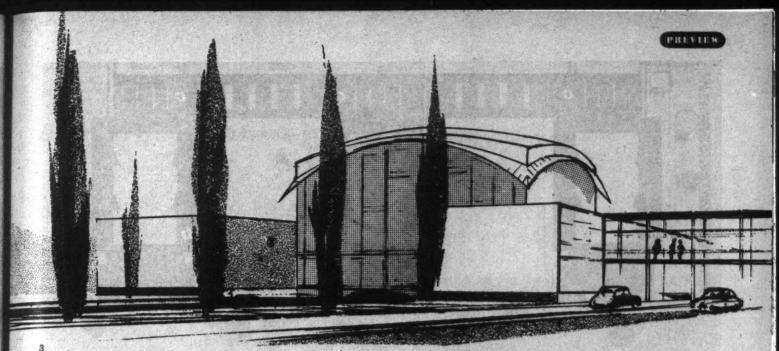
II, physical educat

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14, law collage

15, colleges and inscitute

6, botanical gard



3, Convocation Hall and the examination rooms, with trees flanking the canal which flows under the hall.

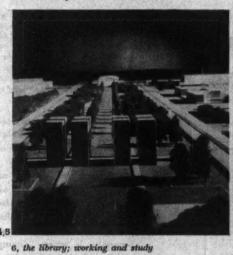
which will become the University Boulevard, and an irrigation canal, crossing this road, traverses the southern part of the university area. Trees and cultivation adjoin this canal, but the site is otherwise featureless scrub, except for a slight depression, subject to flooding, which will be excavated to form a lake, the spoil being used to bank up the roads and make podia for the buildings, a necessary precaution because of the high water-table.

The plan can be regarded as consisting of three zones. The first, adjoining the ring road, contains—for instance—the botanical gardens and the stadium, which serve to screen the university from the city, while serving both. The second zone contains the campus proper and the main teaching areas, to the north of the canal, and certain associated academic institutions to the south. The third zone is predominantly residential, but contains also the students' union and a mosque, whose correct orientation introduces a strong diagonal element into an otherwise regular plan.

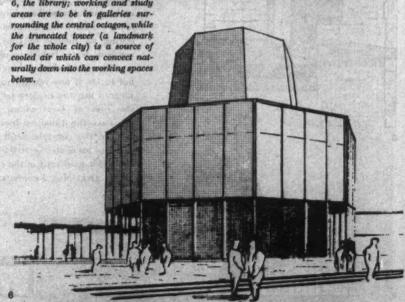
The canal is to be developed as the main formal element of the campus area, forming the basis of a long vista from the University Boulevard, between the towers of the ceremonial Watergate and down to Convocation Hall, which stands across the canal. On the cross axis of Convocation Hall stands the library, and beyond-still on the cross axis-runs the spine of the Humanities Group which closes that side of the campus. The north side of the campus is occupied by the Polytechnic, the east side by the Teaching Colleges (effectively the 'departments' for different studies, in normal university nomenclature) while to the south, flanking the library piazza, is a group containing the museum, a bazaar, and the assembly hall with its ancillary rooms.

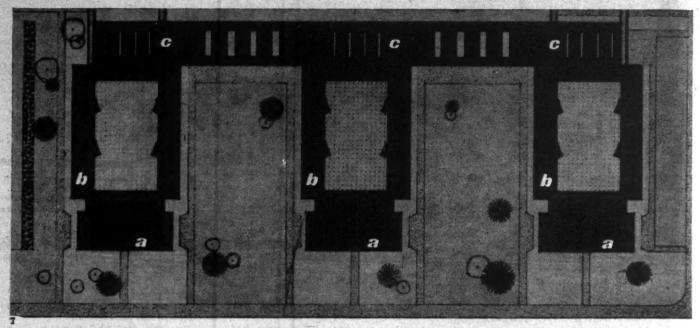
Local conditions affected the design in two basic ways. Firstly, shortages of foreign exchange have led to heavy reliance on locally-produced materials—

4, view of the model, looking down the canal from the University Boulevard with the eighty-foot towers of the Watergate in the foreground, and Convocation Hall in the distance.
5, an early project for Convocation Hall, with its Bengal roof, made while studying the native architecture of the Lahore area.









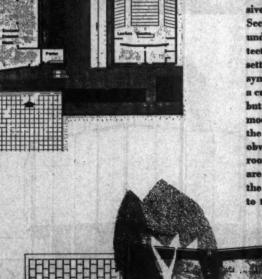
UNIVERSITY OF THE PANJAB

7, part plan of the teaching colleges, an extensible system of courts flanked by tutors' rooms, etc. (b) served by a rank of workshops, laboratories and other specialized teaching areas (c) which can be altered, if need arise, without disturbing the other accommodation. At the head of each court is an area of more heavily-used rooms—auditoria, etc.—(a) which can be air-conditioned at an economic cost.

8, part plan of a teaching college, showing the lecture rooms and other air-conditioned areas at the head of one of the courts.

9, western (outside) elevation of a teaching college, with auditorium roofs rising above the rest of the block.

such as brick and concrete—and prohibited complicated structural techniques. They have also necessitated a sparing use of air-conditioning, and accommodation has been so grouped that airconditioned areas are idle and unoccupied as little as possible, while the rest of the teaching area has been largely handled as isolated pavilions under wide-spreading, shade-producing cover, with extensive use of natural air-conditioners such as pools. Secondly, a serious attempt has been made to understand the philosophies underlying the architecture native to the area—not for the sake of setting up models to copy, nor the adoption of symbolic forms (which would, inevitably, belong to a culture of which a modern university was not part) but to see if any remain valid under conditions of modern use and modern technology. In the case of the roof of Convocation Hall, the outcome is obvious-the transition from the traditional Bengal roof to the concrete vault is natural-but others are less immediately striking. On the other hand, the water-gardening of the canal is directly indebted to the great Mogul gardens of northern India.



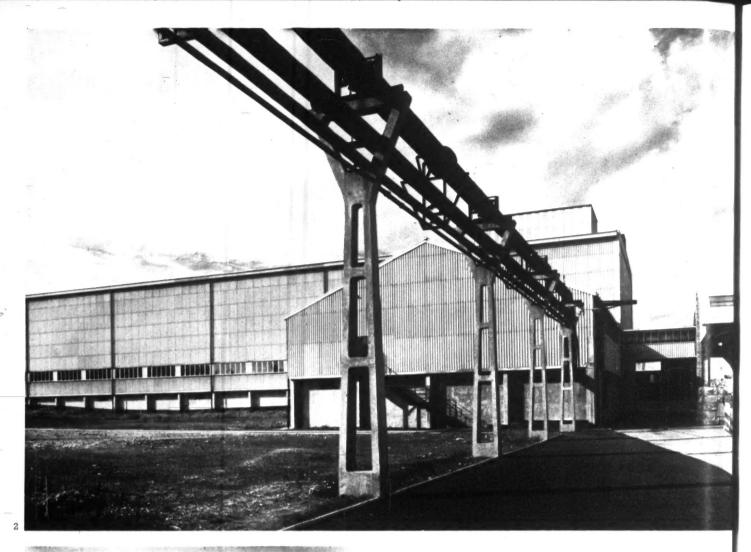
current architecture recent buildings of interest briefly illustrated

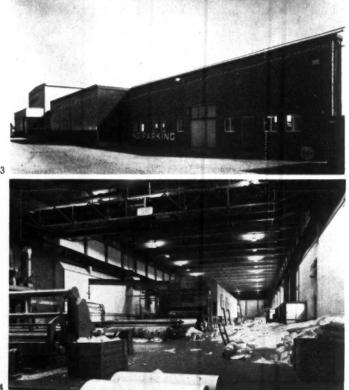
PAPER MILL AT DARTFORD

ENGINEERS: W. S. ATKINS AND PARTNERS Architect in charge: S. M. KOWALSKI



1, the engineers' workshop has an end wall faced with cedar boarding. The panels before the reindores are of multi-coloured facing bricks. The water tower beyond is clad with ashestos sheeting.

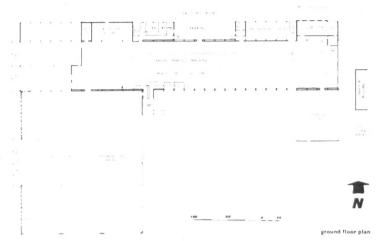




Paper Mill at Dartford

This extension to a paper mill at Dartford in Kent occupies the site of an old tannery, with a 300 ft. frontage on Dartford Creek, where the barges bringing wood pulp can berth. The basement was built with concrete retaining walls and in situ concrete columns, to house the lower part of the main mill machinery and other services and the ground floor is supported on the basement walls and columns and the roof precast, post-tensioned beams spanning 75 ft. between columns. The roof is of insulated aluminium decking, fixed to precast prestressed concrete purlins. The problem of the thermal insulation of large areas was solved by cladding the building with asbestos sheeting, with an air space between this and the internal lining. The only glazing is a horizontal strip of three-ply

- 2, the services gantry carries steam and hot and cold water to the new mill. The columns are of precast concrete. The chemical building is in the background, with the main mill room beyond.
- 3, the stock building, with the two loading bays beyond.
- 4, the main mill room, showing the overhead travelling gantry.



glass 5 ft, deep on the south side of the mill room. A temporary chemical store has been provided which will be demolished later to allow for the construction of a second mill room, and since the conveyor building supplies the raw materials for the existing mill room, this has also been planned to allow for the extension.



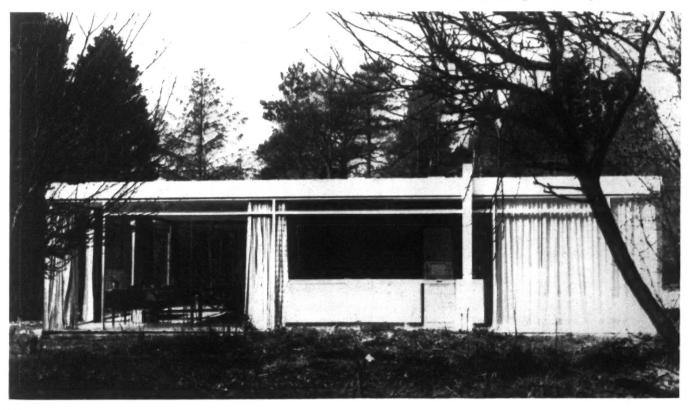
5, the entrance lobby is of mahogany framing faced with cedar boarding and with a painted timber fascia. Steps are of concrete and the balustrading is of painted tubular steel rods with a mahogany handrail.

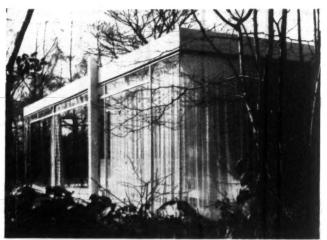
Paper Mill at Dartford

HOUSE AT OCKLEY, SURREY

ARCHITECTS: QUINE AND NEWBERRY

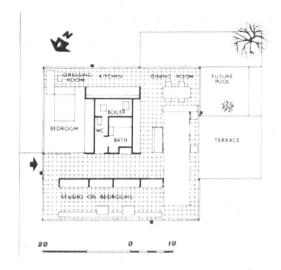
6, the house from the north-west, with the kitchen area in the centre, the dining room on the left and the curtained dressing room on the right.





7, a corner of the house showing the junction of the glass walls. Full lined curtains help to prevent excessive heat loss.





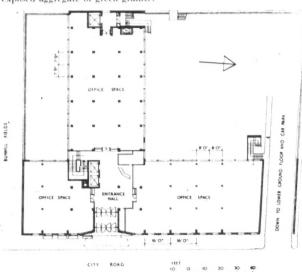
Set in an acre of wooded land on the Surrey-Sussex border, this house was designed by the architect for his own use, as a glass pavilion in which the elements can be easily moved to give flexibility to the internal plan. It is a single storey, thirty-six foot square, steel framed structure, with interdependent beams supporting the roof on four boxed stanchions, which are set one-third of the way along each side of the house. The outer walls are entirely of plate

glass in aluminium framing, with sliding doors on three sides and small sliding vents at high level. A central core houses the bathroom, w.c. and boiler room which provides automatic under-floor heating. This central block is surrounded by store cupboards, which are also used to divide the hall from the studio. Floors are finished with off-white terrazzo tiling, carpeted in the bedroom and bathroom. The roof is an insulated sandwich of fibreglass and building board, finished with bituminous felt.

OFFICES IN CITY ROAD, LONDON

ARCHITECT: MORRIS de METZ

A twelve-storey office block with a T-shaped plan to give maximum daylight. The frame is reinforced concrete in bays of 16 ft. and external columns are set back 2 ft. 6 in. from the face of the building. Beams and stairs were precast on the site; floors are of solid reinforced concrete slabs. The end walls are faced with reconstructed Portland stone slabs. The main façade has reinforced concrete mullions, and spandrels faced in lightweight concrete with an exposed aggregate of green granite.



8, the offices seen across City Road. The panels under the windows of the low block are faced with mosaic.



WORLD

Fruit-Market for Florence

Destined to become one unit in a large group of installations handling front, meat and other produce for the city of Florence, the Mercalo Ortofrollicolo, designed by the engineer Gradio Lensi Cardini, 1, is welcome reassurance that the Italians' bold mustery in engineering is not being lost in the present stylistic faction-



war among the architects. Planwise, the complete installation will consist of the central 'hall' seen in 1, flunked by wholesalers' offices and stores in two blocks on either side (some served by railway sidings, the others by lorry loading bays) and a screen of ancillary buildings round the perimeter of the site.

The structure of the main hall,

The structure of the main hall, at the somewhat similar structure of the wholesalers' blocks, consists symmetrical portal frames built from vertical legs of ordinary inforced concrete, supporting spanwar beams terminating in thirty-fit cantilevers. These beams are bett up from units pre-cast on the and are post-tensioned, and the sees between them are occupied a form of northlight, 2, using wed corrugated glass, cast in detly without framing, for the

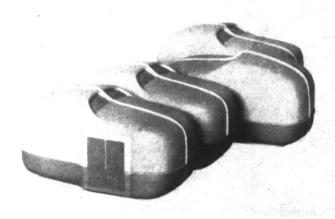


zed pitches. Some of the ancillary ldings have analogous structures in tapering pilotis but this seems, in the case of the 'ceremonial' rance-block, 3, to be for reasons an intended stylistic consistency lat does not quite succeed.

In what Nature of Materials?

Although they are not easy to discover, there are other progressive architects in France besides Le Corbusier and his connection, but because they are outside the Establishment of Architectes D.P.L.G. they get a poor press. Nevertheless, the

of the new building materials is needed; courage is needed to reject a false application of them.' The difficulties of this problem are brought to light in Franz Fueg's introduction to the same issue of Bauen & Wohnen. 'The question can no longer be asked, 'Where



name of Ionel Schein is known, if only because he produced a plastic house in 1956, at the same time as the Monsanto house and the Smithson House of the Future. Still in the plastics field, he contributed an article to a recent number of Bauen & Wohnen (July, 1959) on the influence of plastics on architecture, illustrated with a great number of products and projects—including one by himself (in collaboration with Coulon and Magnant) for transportable exhibition pavilions, 4.

These snug, caravan-shaped struc-

These snug, caravan-shaped structures fully demonstrate his points about the best use of plastics technology lying in vaulted shell forms, without right-angled arrises or, indeed, angled joins of any kind, and in the evolution of site techniques to accommodate the delivery of large space-enclosing units, instead of small structural components. But they provide little comfort or guidance in the problem with which his article ends `. . a question of using a material, a technique, honorably for the sake of beauty. . . A clear insight into the qualities

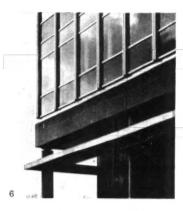
can I use wood? In what way must it be processed?" but "What properties must be incorporated in the synthetic material in order that it correspond to the demands I make on it?" A complete reversal of approach has thus come about. . .? If the 'Nature of Materials' is no longer a design-directive, what sort of insight into the qualities of plasties is necessary to avoid false applications and to honour beauty?

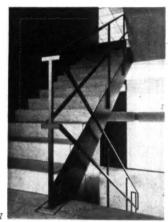
Mannesmann beyond Comment

With the completion of the Mannesmann office tower, 5, in Dusseldorf, German office-block design steps in one stride straight into the post-Seagram epoch, and Schneider-Esleben's design leaves no room for argument about the step taken. The adoption of a steel-tube frame probably represents the inevitable next step beyond the use of r.s.j.'s—here the problems of handling such a structure (and of mating it to a curtain wall) have not



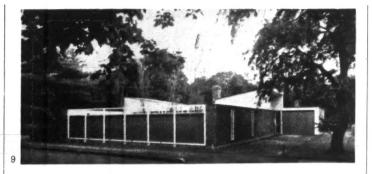
only been resolved almost before they were posed, but have been made the occasion for developing refinements of detailing, 6, even before any crudities existed to be smoothed away. The interior, too, has been made the occasion to read a sermon in steel into detailing of such severity that Arne Jacobsen's place as Europe's leading machine aesthete is clearly in dispute, 7.





But above all, the uncompromised simplicity of Mannesmann's Neutral Technological Frame is so complete, that Schneider-Esleben has been able to do with it what modern movement orthodoxy insists should be possible with every honest building—to site it next to older buildings—of merit without producing disharmony. The new tower is Mannesmann II, and it stands immediately next—is linked indeed—to Mannesmann I, an industrial masterpiece from the drawing board of Peter Behrens, 8, and neither in any way criticizes, harms or argues with the other. The Mannesmann tower does not defy comment, it is beyond it—this is what the masters and the prophets assured us modern architecture would be like.



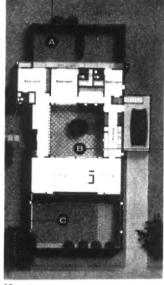


Sert House and the Press

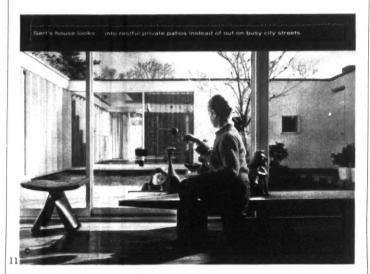
Jose Luis Sert's new house for his—own—occupation in Cambridge, Mass., masterly 9—a exercise in domestic space-manipulation—has received the due praise of the professional press. Thus, Ronald Gourley, in Architectural Record (Mid-May, 1959), praised its 'simplicity, straight-forwardness and respect for time-honoured fundamentals . . . balanced concern for the general, the specific, the large, the small, the whole.'

But it also received a straight accolade from 'America's Family Magazine, for, in one of the most remarkable pieces of popular illustrated journalism on an architectural theme, Look (June 9, 1959) devoted

But it also received a straight accolade from 'America's Family Magazine,' for, in one of the most remarkable pieces of popular illustrated journalism on an architectural theme, Look (June 9, 1959) devoted a six-page coloured spread to it, and contrived to convey more visual information about the house and its interior spaces than any architectural paper did. Look's version of the plan, 10, made the patios instantly comprehensible, and referred the reader immediately, by linked labels, to their actual appearance, while the very large coloured illustrations (which a mass-circulation magazine can afford) were taken from Phillip



10



Harrington photographs which, even in black and white, 11, still give a more immediate impression of the domestic nature of Sert's inner and outer spaces than professional papers were able to do. The result is fully comparable with Esquire's celebrated tour through the curtain-wall country (The Glass Canyon, December, 1958) but whereas that was concerned only with façades and entrances, this transmits far more genuinely architum.

To House an Expanding Democracy

Putting new with old is a severe enough test for an architect at any time, but when, in addition, the old in question is a building enshrining lively national sentiment, then the task is daunting indeed. For this reason alone, Nils Holter's extensions and alterations to the Stortinget (Parliament House) in Oslo would command respect anywhere, but when they are compared to similar work done for other Chambers of



democracy (including the Mother of Parliaments), respect is multiplied by admiration.

by admiration.

Holter's tasks were many: to enlarge and restore the Chamber itself, 12, by adding a bay to the base of the semicircular plan, achieved with such subtlety that it is reported in Byggekunst, No. 4, 1959, that many visitors believe, at first, that Victor Langlet's magnificent, if belated Puginism is still intact; to



provide a new staircase and foyers to replace those removed to make way for the extensions, in which he used a form of simplified Romanesque, 13, not unlike that of Dominikus Bohm's churches in Germany, and echoing the Rundbogeustd of Langlet's exteriors; to reorganize many subsidiary spaces in the old work for services, garage space, library and 'lobbies,' 14; and, finally, to add a large office block at the back.



It is in the last that Holter's skill emerges most clearly. The progression simplification of style as one mover from the Chamber itself towards to back, cutting down to the bare but of the brick structure, effectively prepares the eye for an office-blok which is an entirely modern desire with a gridded and largely glazdificate. No such gradual modification can be made on the outside, who have been been as a gesture of accommodation to the existing work with a dose frame and a flight of staircase with down that are in no sense a stylistic concession, yet make a gentlemany transition.

EXHIBITIONS

PAINTINGS

ven those critics who have the gift f making sweeping yet persuasive eneralizations seem to have found it mpossible to hit on a definition of omanticism that fits all the cases of it shich were exposed to view in the huge international exhibition devoted to the Romantic Movement, recently to be seen at the Tate Gallery and for someone like myself, addicted to making value judgments which are private and unverifiable, defeat was inevitable. The only helpful generalization of my own occurred to me after an intensive study of the art of Hieronymus Bosch and the early paintings of Chirico, when I arrived at the conclusion that if a picture appeared to be meaningless its meaning was bound to be erotic. The Surrealist Movement was in full swing at the time so there were plenty of other pictures about which lent support to this notion and partly persuaded me of its validity. I haven't found much use for it in recent years, and I was pleased to find a picture in Wildenstein's recent exhibition of 'Highly Important Paintings by Rembrandt, Boucher, Cézanne, Hals, Guardi, Gauguin and Others' which gave me an excuse to recall it. The Tate exhibition did, indeed, contain some highly important works, and perhaps the most important of all was a small canvas by Scurat, a pure abstraction if ever there was one, divided with geometrical rigidity into horizontal strips of colour, which neverheless immediately presented to the eve eview of a house and a garden ensconced n the rich golden stillness of a summer fternoon. The picture which allows my ittle generalization to make its not very important point is in a far less exalted class. It is by Antoine Caron who worked for Henry IV in what is known as the second. eriod of the School of Fontainebleau. It is ntitled 'The Triumph of a King' in the atalogue, 1, but as such looks pretty neaningless. The figures have only a decoraive relationship to one another; the King' has drawn his sword for no reason it all and the soldier in the foreground is walking rapidly without going anywhere. It is, in fact, simply a display of handsome men and women, and it might be searer the mark to call it 'The Triumph of Eros presented as an Unknown Subject,' The fanciful landscape at the back is painted in the sudden, unnatural but delicious blue which in the work of this charmingly elegant and faintly cynical school stands for distance.

The Romantic painters were very far from evnical. The lesser men were full of big thoughts and the hope of exorbitant experience exempt, as Henry James remarked of the writers of romances, 'from the conditions that we usually know to attach to it.' They tended to use painting as a means either of inciting or recording experiences which 'took them out of themselves.' In the language of our time, they wanted to be 'sent,' and even the great Delacroix was not above the game of 'facing danger' as opposed to facing reality. The painters of mountain gorges, dark forests. Vesuvius in eruption, biblical catastrophes and violent scenes from Shakespeare were, for the most part, merely reflecting the violence and revolutionary fervour of the time in a muddled, fanciful and frightened way. They were escapists whose escapism was coloured by the atmosphere of the world they wanted to escape from.

It is, I think, unusual to present the minor figures and the weak and discredited aspects of a movement as if they had to be taken into serious consideration when assessing its creative achievements, but that appears to have been the task which the organizers of the Romantic exhibition set themselves.

One critic estimated that there were not more than thirty masterpieces among the



hundreds of paintings and drawings included in the exhibition, and although I do not have much sympathy with the kind of assurance that enables a man to take such a count, and feel that he might possibly have missed one or two, there is no doubt at all that an air of mediocrity took possession at the Tate, in spite of the splendid opening rooms dedicated to the English light, and caused many critics to agree with those who brought this extraordinary miscellany together that Romantic art was overshadowed and bedevilled by Romantic literature and that it couldn't be expected to yield much in the way of great painting or anything at all resembling a coherent aesthetic. But if, instead of treating Romantic painting as a minor manifestation of a spiritual upheaval which occurred between 1780 and 1848 and using the work of a host of minor artists to prove their point, they had considered the Romantic Movement in painting to be primarily a new 'mode of beholding,' a new way of facing reality, determined by a profound response to the turbulence in man and nature, it would not have been difficult to make an exhibition of great paintings. Seven of the artists who were actually included in the exhibition—Gova, Géricault, Daumier, Turner, Constable, Delacroix and Courbet -would have formed the major part of it and been given equal representation. Of these seven masters, only Delacroix - who was a bit of a culture snob was in any way bedevilled by literature, and he was great enough most of the time to transform his illustrations into painterly terms, though one wouldn't think so before a picture like 'Hamlet and Horatio in the Graveyard' or 'The Shipwreck of Don Juan.' But these second-rate works by Delacroix were, in an exhibition arranged to show what were called the 'principal themes of the period,' as useful as the splendid 'Lion Hunt' and the 'Women of Algiers' which graced the room allotted to 'Wild Animals and the Cult of the Exctie,' for it was obviously hard to find

works of any consequence for 'The Romantic Interpretation of the Poets' and the literary Delacroixs at least introduced a touch of seriousness into an outstandingly ridiculous group of paintings. Incidentally, the only first-rate painting of the nude in the entire exhibition—a small canvas by Delacroix, 2—was exhibited under 'Wild Animals and the Cult of the Exotic' because a parrot is depicted in the bottom right-hand corner.

I do not know why the year 1848 was chosen as the final year of the Movement. It is usual, I agree, to associate it with the first half of the century, and although it seems to me to be an arbitrary dating as far as painting is concerned, the year 1848 probably has a significance that I have missed. It happens to have been the year in which 'Wuthering Heights' and the Communist Manifesto were published, but since neither of them was in the display of Romantic literature it clearly has nothing to do with them. Perhaps the fall of Louis-Philippe or even the July Days-was considered to mark the end of the epoch.

All the same, an extension of the period into, say, the early sixties, before the advent of Impressionism, would have allowed the inclusion of Manet's 'Dejeuner sur l'herbe' and 'Olympia,' and brought Courbet more fully into the picture with such things as his fighting stags and his painting of Lesbians: the latter is a notable contribution to Romantic eroticism, but this is a matter which the exhibition left well alone. Probably its absence from the list of principal themes explains why Fuseli's melodramas were preferred to his maryellous drawings of prostitutes. I think that the list must have been drawn up before the pictures were chosen: there doesn't seem to be any other way of accounting for the boring rows of 'Italianate Landscapes' and the almost equally dull roomful of 'Mountains,' or for some of the artificial and prosaic works - among them a silly Fragonard and a large solemn portrait by Wright of Derby of an unprepossessing gentleman, trying to lie gracefully on the grass, who evidently had what's called a 'romantic disposition'—in the room devoted to 'Feeling,' a room which left one with the impression that it was partly reserved for pictures which arrived by mistake.

There was, of course, much to be thankful for. There was a fascinating group of works by Caspar David Friedrich. He spent most of his life in Dresden, totally isolated from the mainstream of painting, and he must be considered a great provincial. His compositions are static, his colour very cold and his sense of light is fraught with an uneasy anticipation of the dark. The figures in the foregrounds of his

landscapes almost invariably have their backs towards us; they are dark, anony mous silhouettes against the light an almost as insubstantial as phantoms. Thes still and silent watchers of infinity and th unknown would seem to be projections of himself: they are the counterpart of th romantic novelist's appearance in his ow books, a device which came to be known a 'romantic irony' and which in Friedrich' hands becomes an emblem of the in explicability of the human condition Photographs of his major works were no available, but this sepia of a rocky beach 3, gives some sense of the presence of the brooding observer he has not depicted.



It was, however, the work of Turner and Constable which represented most clearly and powerfully the Romantic approach to painting. Turner's 'The Burning of the Houses of Parliament,' 4, is filled with a demoniac elation which is probably without parallel outside his own work and as a creative response to a destructive force is more—breath-taking—than—Leonardo's deluges.



One doesn't usually think of Constable as an artist dedicated to the pursuit of elation, but in his original painting of 'The Leaping Horse,' which was, I think, the most impressive picture in the exhibition, there is an all-over saturation of the canvas with violent paint marks which form one great indivisible act of possession. There is no let up anywhere; no dead patches, no artistic 'intervals.' He does not need a conflagration or a lion hunt to symbolize his creative power. The fire and the fierce enveloping pounce come totally from within.

Robert Melville

RT IN USE

TILED CHURCH WALL

Coloured tiles have obvious advantares for exterior decoration: being part of the substance of the wall, homogeneity with the architecture is more likely to be achieved, the scale of the basic unit—that of the single tile conforms to that of surrounding walls when these are brick, and the colours are permonent and self-cleaning.

An unusually distinguished tiled wall, designed by Mr. William Gordon, has recently been incorporated in a church at Licester - St. Aidan's on the New Park Estate (architect, Basil Spence). It forms the recessed portion of the porch. Informal in composition and relying on texture rather than repeated pattern, it therefore represents a wholly different aesthetic conception from the tile decorations of Latin America, where the most noteworthy experiments in the external use of decorative tilework have hitherto been made. It also differs from them in being of stoneware, instead of ceramic, tiles. The predominant colours are green-blues, supported by brown, grey, black, yellow and white.

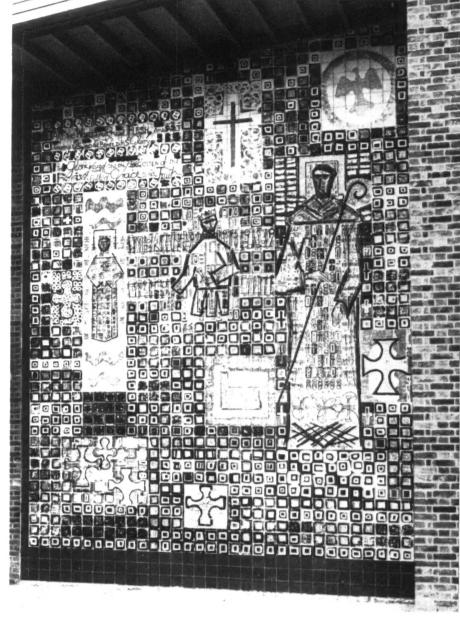
The size of the panel is 24 ft. by 17 ft. The main figure represents St. Aidan; the smaller ones King Oswald, his patron, and St. Cuthbert, his successor. The crosses incorporated in the design are based on the early crosses of Northumberland.

COUNTER-ATTACK

DUNGENESS

Oungeness is to have an atomic power station. Whatever the rights and wrongs, it is going to be lt. so the question becomes what sort of atomic power station. Can respecting the genius luci have an ameaning when the object to be accommodated is significant. The productionary as a set of reactors? I sink it can, and I think in this case the landscape poblem is fairly simple and clear-cut.

Jungeness is at the southern end of Romney rsh; it is completely flat, and is made up enly of shingle for the last mile and a half south Lydd. On the point there grew up first a lightuse and cottages, then gradually and without in all manner of objects-shacks, houses, poles, lons, water tanks. The place is a forest of rticals which achieves a kind of wayward endthe-world feeling of its own. Indeed, it has movverticals as well as fixed ones; for there is deep ter very close to the point, and quite big boats ss within a few yards of the shore, often with perstructures as tall as the lighthouse. The whole ing looks like a composition put there by some hat younger brother of Edward Wadsworth, 1 and 2.



If the new reactors try to be chunky vertical shapes, like extra-large ships' superstructures, there might be a chance of producing a pattern of angular bizarreness of creating a place. That the. type of place would be something completely new doesn't matter at all. The illustration, 3, shows the sort of effect-I am trying to suggest. From the published designs of atomic stations, particularly of Berkeley, such shapes do look feasible, and they could be painted as positively as the lighthouse. The shingle could be banked to make ramparts to hide the switchgear and the low buildings, so that the main reactors rise up sheer from the ground; if the power lines were taken away up the eastern edge of the marsh, which is already a remarkable tangle of verticals built-up all the way to Hythe, they would again be adding to an existing pattern, not intruding into the rural and lonely inland parts of the marsh. Unfortunately the Minister of Power has announced his intention to do just the opposite: to take the



, shacks and water towers at Dungeness.





2, verticals at Dungeness, and 3, chunky shapes to continue the pattern.

power lines slap across the marsh, in spite of the fact that at a public inquiry at which the two alternative routes were discussed, the route across the marsh was opposed by the county council, its landscape adviser, the CPRE and the Royal Fine Art Commission.

As to the station itself, the one thing that would be most out of place would be a big horizontal mass which would try and compete with the horizon-what breaks most into the pattern around Dungeness at the moment is not any of these queer up-and-down objects but the long horizontal shape of the apparently quite unoffensive and simply designed hangars at Ferryfield. But is the architect going to be brought in early enough to have some say in basic decisions like this, or is his job just to be some kind of sop to amenity? My bet is that the Dungeness reactors are going to be smooth and slabsided (or maybe, if a bit more 'up to date,' rough, brutal and slabsided) with the architect's vision and the artist's perspective omitting switchgear, wire fence, car park and any kind of representation of the existing landscape. I hope I'm wrong. Ian Nairn

OUTRAGE AVERTED

Tenby is a delightful, near-perfect seaside resort amongst fine coastal scenery in the Pembrokeshire National Park and whilst the local council seem set on municipal improvements to make it comparable with less perfect places, the Friends of Tenby—proud of their town and aware of its charms for tourists (on which most of the people there live most of the time)—are making a brave stand against the onset of outrage. So far Subtopia has not taken root here as elsewhere. It would be criminal if it did.

From across the sands of the south beach the town presents itself as a gently folded Regency screen of cream hotel facades perched above the cliffs—neat, clean, and glowing in the evening light of a contemporary engraving. From the

north there is the more continental view of a gav and colourful port, 4-promise of foreign charm subtly fulfilled in the town itself where narrow streets and narrower pavements, steep alleys, and unselfconscious architecture are compressed within bastioned mediaeval walls that hide. contain, and present all sorts of driving hazards, 5, and provide what the official guide-book calls 'an attractive air of quaintness.' This guide goes on to describe how one of the most interesting thoroughfares in Tenby runs along the whole length of the town walls: 'St. Florence Parade, the portion between the sea and the South Gate (called the Five Arches) is lined with flower beds, while the South Parade (the part beyond the gate) is shaded by a row of trees whose blossoms make a delightful display in the springtime.' This for once in an official guide is understatementunderstatement in the sense that it omits to

describe how the flower beds are caged behird chicken-wire fencing and guarded by a cruce concrete lamp standard, 6; understatement al o in that South Parade is a fine example of townsca; e that should on no account be spoiled. You don't need to be a connoisseur to appreciate this. Yeu don't need to analyse it to see why; in fact the component parts are simple. The town walls at I arches stand by courtesy of the late Geore Chater, FRCS, who obtained from the Court of Chancery in 1873 an injunction to preserve the They are not a museum piece either but form the back garden walls of properties in Upper France Street. There is a tarmac payement shaded by the $aforementioned\,trees\,making\,an\,informal\,esplanad\ ,$ 7, a place to gossip, to sit on long benches, or wat for the bus, 8, 9. No fuss, no show, no pretentiou ness-and so far, no municipal improvement But what the guide-book omits to mention is the















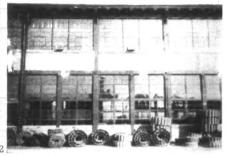
Toyn Council's incomprehensible attempt to re move the trees, cut back the pavement and er t a bus station! (nor does it mention how the incil cut down the trees along the sea front in face of expert advice and how two people were ed in the landslides predicted by the experts). After two public meetings called by a handfulresidents where proposals were put forward for a Ratepayers' Association to fight the Council, e inter proposals by those who preferred to ick along more gentlemanly lines resulted in launching in March, 1959, of the Friends of Taby, an association with Lord Merthyr as presideat, to protect and improve the unique character of the town in association with the Town Council at 1 other organizations. There are now over 200 m mbers including people who return to Tenby voir after year for holidays. Associates can join for as little as 2s. 6d. a year; full members 10s. 6d. So far the Town Council disapprove but the proposed outrage behind the town walls has been sledved. The Friends have since learned of the Cavic Trust and become affiliated, and recently prevented the possibility of a Butlin holiday camp just outside the town by buying up the land themselves, and are now hoping to get it scheduled as an open space. There was no question of disliking holiday camps in themselves, but simply that unlike all the other Butlin sites, this one was very near an existing town and would have seriously unbalanced the economy. Their next campaign will be to clear the jetty of parked cars, 10. Admittedly the town has a parking problem; what town hasn't? But the jetty is surely one place where boatman, resident, or holidaymaker should be free to wander unharried by any marauding motorist. Raymond Spurrier

HISTORY

FRAME OF STEEL

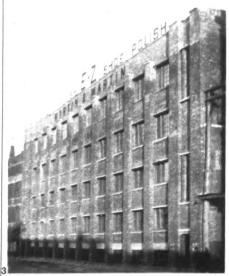
The contribution of Chicago to the development of steel-frame construction from the late seventies to the nineties is familiar. Its early use for warehouses and factories on the other hand has been studied little. The pioneer here seems to have been the New York architect Charles H. Caldwell (1863-1932). Warehouses until after 1900 were still s ructures with heavy stone or brick walls, ten articulated by giant arches round s veral tiers of windows, i.e. of the type Richardson's famous Marshall Field \ holesale Warehouse in Chicago which v is built in 1885, and indeed of an early Lilding at 549 West 26th Street in New ork by Caldwell himself, which was I ustrated in an article by the celebrated citic Russell Sturgis in 1904. Then wever, in the same year 1904, Caldwell Lilt for the Fischer Marble Company at : 10 Locust Avenue in the Bronx a twos oreyed building with an exposed steel ame, 1 and 2. The building was discassed by Sturgis in 1905. It has aged 1 markably well and was found at a recent I novation to be in perfectly good condition. The heavier vertical supports outside are rectangular in shape and composed of





1, 2, Charles Caldwell's two-storey factory in the Bronx in 1905 is the earliest known industrial use of an exposed steel frame.

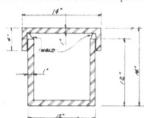
two pieces welded together, a 14-in, by 4-in, steel channel section one inch thick at all points, and a 12-in, by 12-in, threesided section also one inch thick. This latter section has cut-outs to permit the joining or welding of the two sections from within the column and to allow the painting of the interior face. The floor construction is of steel girders supporting wood joists and wood flooring; this floor is today rated to carry a load of 125 p.s.f. -a very respectable capacity indeed. The steel girders are supported by interior steel pipe columns about 12 in. in diameter, and the roof, also of steel girders, is supported by the same type of column, 4, 5.



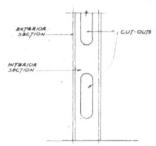
3. In this factory designed by Frank Lloyd Wright in 1905 the steel frame is concealed behind a brick front.

The historical problem posed by the Fischer factory is, of course, how Caldwell could have moved so quickly from one type of structure to another so amazingly different. The most likely answer lies in the location of the building. The Bronx at the time was not yet subject to the strict fire regulations of Manhattan. The encasing of iron in masonry was here not insisted on. Sturgis actually wrote that Caldwell had shown how most tall buildings ought to be designed if only the problem of fireproofing could be overcome. The editor also saw the significance of what Caldwell had done. 'It will be felt at once,' he wrote, 'that a new possibility is shown to exist, that a new motive of design is secured for us, whenever the time comes that we can build as we wish to build—as our instincts direct us to build-with a frame of steel.'

The episode of the Fischer factory sheds much light on the history of the steel frame in American industrial buildings. In its period this building represented a really radical break with the tradition represented



4 SECTION OF BUILT-UP STEEL COLUMN



5 ELEVATION OF COLUMN SHOWING CUTOUTS

by Richardson's Marshall Field Wholesale Store. Indeed even after 1900, when the steel frame had been completely accepted for skyscrapers, factories were still hiding behind solid brick and stone fronts. This applies for instance to the Schoenhofen Brewery at Chicago, a building of 1904 by R. E. Schmidt which Sturgis praised, and also to Frank Lloyd Wright's early E-Z Shoe Polish Works of 1905, 3.

The subsequent history of the steel frame in American industrial building is a confused affair. On the whole, American designers did not investigate its possibilities with anything like the same fervour as men such as Behrens and Gropius in Europe. Yet it remained for an American

industrial architect, Albert Kahn, to carry the steel frame to its greatest height in factory design. Kahn's factory of 1905 for the Packard Motor Company employs substantially the same expression of the curtain wall as Caldwell's building, which was finished slightly earlier. The Packard Plant, framed not in steel but in reinforced concrete, stresses the neutrality of the skeleton in much the same way as the factory in the Bronx. A few years later, in 1909, Kahn carried the same ideas much further in designing the tremendous Highland Park Plant for Henry Ford; after that date Kahn went on experimenting with even greater areas of glass, until he reached the well-known Dodge Plant of the Chrysler Corporation (1935). In industrial building the steel frame has hardly ever. been handled with greater skill than in this building. The stride from Caldwell's pioneer effort of thirty years before is Leonard K. Eaton

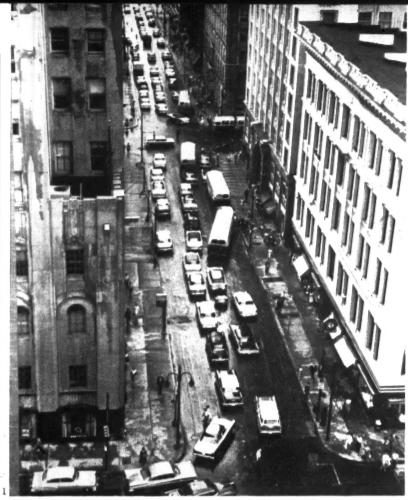
TOWNSCAPE

DOWNTOWN TRANSFORMATION

In 1958 the American magazine Fortune published a series of articles under the general title Exploding Metropolis which dealt with such problems as urban sprawl, city administration, and how downtown can be made a more enjoyable place. For the last of these Ian Nairn and Gordon Cullen helped with advice and drawings, and the articles applied many of the lessons learnt in England to the American situation.*

Toledo, Ohio, has now put some of these theories into practice and, in a new pedestrian mall in the downtown area, has done something to restore to the citizen a place where he can drift, and shop, and sit, with no traffic to worry about, but with the city amenities of shops and restaurants close at hand. This transformation, from the car-filled canyon, 1, to the seemingly spacious mall, 2, has been achieved very simply and at no great cost. The road has been closed to all wheeled traffic, lawns and pools have been set so that the roadway winds between them, slides and swings make a children's playground and penguins from the Toledo zoo add to the fun. The mall was opened in August for a trial period of 45 days; if the local enthusiasm at its inception-40,000 visitors in the first week-end-is anything to go by, it should become a permanent feature of Toledo and an inspiration to other city authorities.

* See AR April 1958, and October 1958.







DOMESTIC WINDOWS OFF THE PEG

by John Carter

How closely do our standard windows reflect our needs? The author of this article, while not attempting a detailed review of all the standard windows available in this country, considers the range of performance they offer, taking as 'standard' not only those which are fully such, but also those which are standard in section only.

windows before the war

An intelligent and much better informed approach to lighting, the lightweight panel idea in walling and a more sensitive grasp of heating and ventilation—these are what have most affected window design in the last twenty years. In manufacture, too, industrialized methods have influenced the departure from traditional forms. Before then, there were really only two choices—the standard wood or metal casements which seem in retrospect to have been evolved exclusively for the speculative market; or 'purpose made' windows to one's own design. Since the fundamental questions of light, ventilation, heat loss and site organization had not yet been 'canvassed at the seientific level, all windows accepted solutions evolved long before for timber; outward opening lights, small pones and sinde nutty elazing.

panes and single putty glazing.
Postwar development and research have shown us that, in the traditional window, heat loss and weather and draught exclusion were inadequately extered for, that methods of opening were insufficiently explored and maintenance often difficult. They also showed that traditional understanding of contrast grading and restricted sky glare which was so gracefully evident in tall Queen Anne wandows with deep reveals, had to be restated to accommodate the layer modern glass making sizes. Ladly, that there was an ansatisfatory boundary of responsibility be ween window maker and window in the state of the state of

dimensions

he dimensioning of standard w dows has two aspects: on the one had there is the need for a window to at adjoining building materials, on the other there is the need for a winda to correspond to the proportional bits of the times.

hough the 4-inch module is now we I in the offing, it might generally be considered reasonable that standard windows should at least conform to rick sizes. An examination of the free sizes are sizes and in this page with this is far from the case. It is reason for this disparity is to be found in the fact that standard winds so we their origin to craft practice in that the joinery craft has always in independent of the bricklayer.

The first standard windows were of metal and were put on the market by Messrs. Hope's before the first world war. Described as 'cottage' windows, they were designed to meet the requirements of architects, the local authority 'cottage' being the particular use in mind. It is, of course, one of the bugbears of those who put a revolutionary article on so conservative a market as that of building that, if they are to get a ready sale, they must not only provide for an existing use, but they must provide it in substantially the same form as that of the article they hope to replace, even though the materials and methods used might suggest something quite different.

In fact, the existing British Standard for steel windows, BS990, owes too much to the early cottage window, 1. Not only as regards the curious anomaly of putty and glazing bar mentioned above, but also in its general proportions; for, though glazing bars are no longer de rigueur, the actual form of the window is evidently of the past.

The most characteristic of our requirements in this matter is our preference for the landscape proportion that is, for a window that will be wider than it is high. Landscaping,' of course, raises a crop of contingent problems. If a landscaped window is to be fixed, it is going to be hard to clean from inside unless

there are opening lights to right and left: if it is to open, then its weight becomes a problem and neither of the traditional methods of vertical sliding and side hanging can be made to work. The commonest answer is the central pivot, whether horizontal or vertical; though this will foul the curtains if opened wide. In general this is probably a small price to pay for so fundamental an aesthetic preference and it is encouraging to see the substantial number of standard windows (particularly of wood) which can be got in landscape proportions.

Another of our common requirements which are less well provided for is the storey height window.

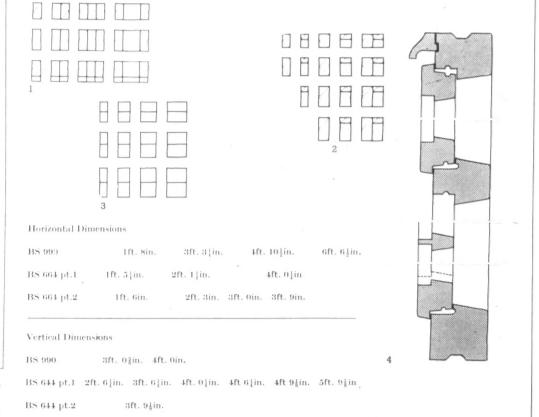


chart of steel windows to B.S. 990. chart and section of wood windows

S. 664, pt. 1.
chart of wood windows to B.S. 664, pt. 2.
comparative table of dimensions of illustraons 1, 2 and 3.

industrial architect, Albert Kahn, to carry the steel frame to its greatest height in factory design. Kahn's factory of 1905 for the Packard Motor Company employs substantially the same expression of the curtain wall as Caldwell's building, which was finished slightly earlier. The Packard Plant, framed not in steel but in reinforced concrete, stresses the neutrality of the skeleton in much the same way as the factory in the Bronx. A few years later, in 1909, Kahn carried the same ideas much further in designing the tremendous Highland Park Plant for Henry Ford; after that date Kahn went on experimenting with even greater areas of glass, until he reached the well-known Dodge Plant of the Chrysler Corporation (1935). In industrial building the steel frame has hardly ever been handled with greater skill than in this building. The stride from Caldwell's pioneer effort of thirty years before is gigantic. Leonard K. Eaton

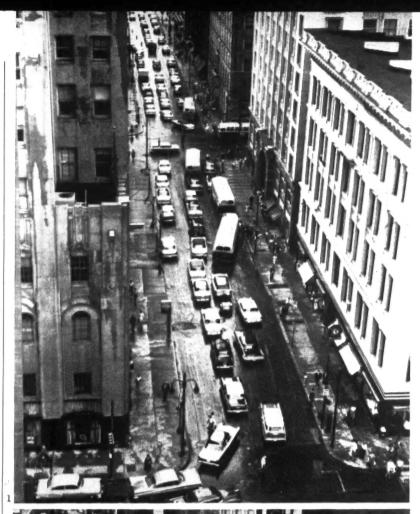
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DOWNTOWN TRANSFORMATION

In 1958 the American magazine Fortune published a series of articles under the general title Exploding Metropolis which dealt with such problems as urban sprawl, city administration, and how downtown can be made a more enjoyable place. For the last of these Ian Nairn and Gordon Cullen helped with advice and drawings, and the articles applied many of the lessons learnt in England to the American situation.*

Toledo, Ohio, has now put some of these theories into practice and, in a new pedestrian mall in the downtown area, has done something to restore to the citizen a place where he can drift, and shop, and sit, with no traffic to worry about, but with the city amenities of shops and restaurants close at hand. This transformation, from the car-filled canyon, 1, to the seemingly spacious mall, 2, has been achieved very simply and at no great cost. The road has been closed to all wheeled traffic, lawns and pools have been set so that the roadway winds between them, slides and swings make a children's playground and penguins from the Toledo zoo add to the fun. The mall was opened in August for a trial period of 45 days; if the local enthusiasm at its inception-40,000 visitors in the first week-end-is anything to go by, it should become a permanent feature of Toledo and an inspiration to other city authorities.

* See AR April 1958, and October 1958.





DOMESTIC WINDOWS OFF THE PEG

by John Carter

How closely do our standard windows reflect our needs? The author of this article, while not attempting a detailed review of all the standard windows available in this country, considers the range of peformance they offer, taking as 'standard' not only those which are fully such, but also those which are standard in section only.

windows before the war

An intelligent and much better informed approach to lighting, the lightweight panel idea in walling and a more sensitive grasp of heating and ventilation—these are what have most affected window design in the last twenty years. In manufacture, too, industrialized methods have influenced the departure from tradi-ficial forms. Before then, there were really only two choices—the standard wood or metal casements which seem in retrospect to have been evolved in retrospect to have been evolved exclusively for the speculative mar-ket: or 'purpose made' windows to one's own design. Since the funda-mental questions of light, ventilation, heat loss and site organization had not yet been canvassed at the scientific level, all windows accepted solutions evolved long before for timber; outward opening lights, small panes and single putty glazing.

Postwar development and research have shown us that, in the traditional window, heat loss and weather and draught exclusion were inadequately catered for, that methods of opening were insufficiently explored and maintenance often difficult. They showed that traditional understanding of contrast grading and restricted sky glare which was so efully evident in tall Queen Anne dows with deep reveals, had to re-stated to accommodate the er modern glass making sizes. tly, that there was an unsatisory boundary of responsibility ween window maker and window

dimensions

he dimensioning of standard lows has two aspects; on the one I there is the need for a window adjoining building materials, on other there is the need for a winto correspond to the proportional of the times

hough the 4-inch module is now in the offing, it might generally onsidered reasonable that stanwindows should at least conform rick sizes. An examination of the ensional tables in this page ws that this is far from the case, reason for this disparity is to be and in the fact that standard wins owe their origin to craft practice that the joinery craft has always n independent of the bricklayer.

The first standard windows were of metal and were put on the market by Messrs. Hope's before the first world war. Described as 'cottage' windows, they were designed to meet the requirements of architects, the local authority 'cottage' being the particular use in mind. It is, of course, one of the bugbears of those who put a revolutionary article on so conservative a market as that of building that, if they are to get a ready sale, they must not only pro-vide for an existing use, but they must provide it in substantially the same form as that of the article they hope to replace, even though the materials and methods used might

suggest something quite different.

In fact, the existing British Standard for steel windows, BS990, owes too much to the early cottage window, 1. Not only as regards the curious anomaly of putty and glazing bar mentioned above, but also in its general proportions; for, though glazing bars are no longer de rigueur, the actual form of the window is evidently of the past.

The most characteristic of our requirements in this matter is our preference for the landscape pro-portion that is, for a window that will be wider than it is high. 'Landscaping,' of course, raises a crop of contingent problems. If a landscaped window is to be fixed, it is going to be hard to clean from inside unless

there are opening lights to right and left: if it is to open, then its weight becomes a problem and neither of the traditional methods of vertical sliding and side hanging can be made to work. The commonest answer is the central pivot, whether horizontal or vertical; though this will foul the curtains if opened wide. In general this is probably a small price to pay for so fundamental an aesthetic preference and it is encouraging to see the substantial number of stan-dard windows (particularly of wood) which can be got in landscape proportions.

Another of our common requirements which are less well provided for is the storey height window.

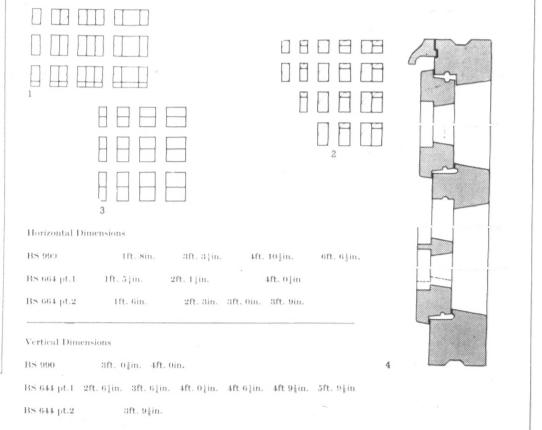
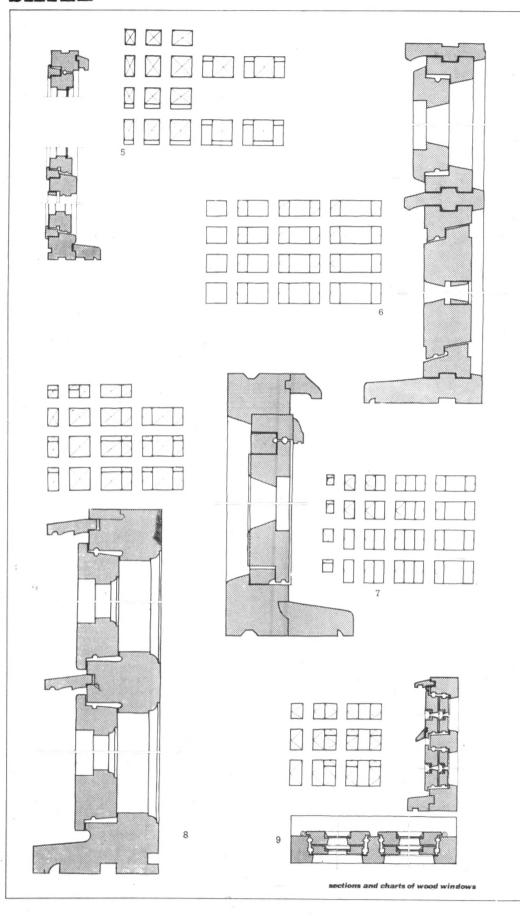


chart of steel windows to B.S. 990.

chart and section of word windows to

^{8, 664,} pt. 1.
chart of wood windows to B.S. 664, pt. 2.
comparative table of dimensions of illustrams 1. 2 and 3.



- 5, chart and section of Jayanbee windows6, chart and section of Modolite windows7, chart and section of Sadd windows
- s. chart and section of Sharp Bros. and Knig
- 9, chart and section of EJMA double glaz-

This, of course, raises difficulties standard window range, as a stheight window can be divided in so many different ways. Two in esting solutions have been put on market in recent years; one is Messrs. Janes' Modolite system when allows for the insertion of a variet of infilling lights within a system of standard sections, 6. The other, which is more elegant visually, is that of John Sadd, which inserts hardwald sections within the softwood fraces to give the required stiffness with less bulk, 7.

tall buildings

The tendency to build high in recent years has faced the stand of window manufacturers with another problem, namely, how to permit glazing from the inside. Some firms, like Crittalls, offer the full standard range with the glazing bars reversed range with the gazing bars revered so that the putty faces the room. This is, of course, against all precedents, but is visually an advantage as the light, catching the splayed surface of the putty, produces a less harsh contrast. Another approach to the same problem is to retain external putty but to use the horizontal pivot as is done in the Continental type wood window of the Carda type and, in metal, in Hope's Standard Reversible Windows

sible Window.

Tall buildings have also served to Tall buildings nave also serves on hasten the use of double glazing. Double glazing of the sandwich type fairly easily accommodated in Double glazing of the sandwich type is fairly easily accommodated in metal standard sections, but there are serious doubts about the effectiveness of the edge seal. Double glazing in two separate leaves presents a formidable problem to window manufacturers, EJMA have put forward designs for both types, though it remains to be seen how readily they are taken up by indivi-

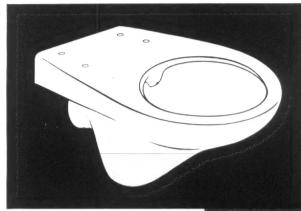
readily they are taken up by individual manufacturers, 9.

One of the standing objections to wood windows is that they let in draughts. The only sure way of whittling away this objection is to use double rebating. But, in the sphere of standard windows this is still not so common as it ought to be. An exception is Sharp Bros. and Knight's 'Stormproof' range.

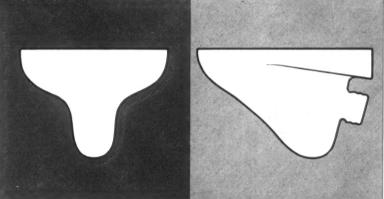
aluminium and plastics

So far we have been considering only steel and wood. The most important newcomer to the field is So far we have been considering only steel and wood. The most preportant newcomer to the field is aluminium. But here it is interesting to note the same forces at work which influenced the first stell windows. The commonest use of aluminium is for vertical sliding sashes. These are a very high class product, but offer no real advantaces over the traditional timber so have over the traditional timber so have over the traditional timber so have the traditional timber so have over the traditional timber so have of the material employs the horizon all sliding sash of the transport indust year. This type of window commonly contained to the product of a drip mould—to keep the wete the and thus may be said to have brought. and thus may be said to have brou hit about a complete revolution in vurdow making. Since an aluminium sights far lighter than its counterpart in wood or steel, the smaller sizes nay be lifted out for cleaning.

Aluminium has not proved quite so trouble-free as regards maintena ce



design



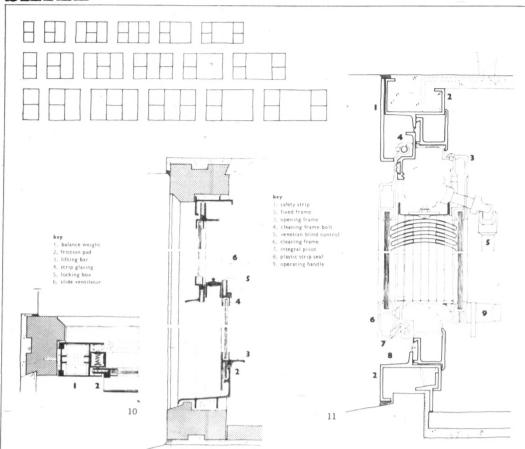
material

The 'Standard' Sanwall closet—wall-hung to facilitate floor cleaning—is a refreshingly simple design. Beneath its glazed exterior is 'Standard' vitreous china, a non-porous material. Even without its glaze it is non-absorbent. No moisture can enter the body material and swell it, making a 'mosaic' of the glaze and so letting in more moisture. 'Standard' vitreous china is a clean material. It is strong, too, and highly resistant to breakage. For fine design in a really clean and durable material, always specify 'Standard' vitreous china.

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SKILL



continued from page 292]

as we had hoped—it does not leed painting, but it does need re ular cleaning. For this reason the u of plastic-coated steel, as in leal Casement's 'Mipolam' range of sindows, is at least of interest, 13.

conclusions

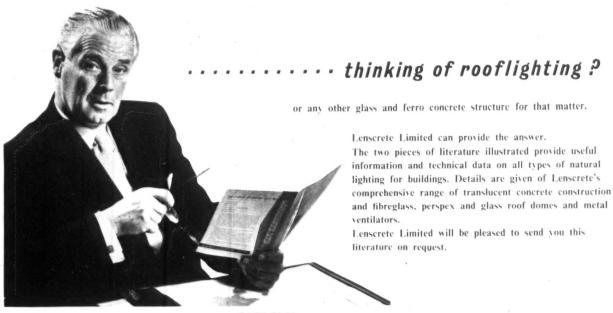
In reviewing these windows for dwellings, it becomes clear that the timber industry has responded a ore fruitfully than the steel indu ry; that the newcomers—'contine tal' ideas and the vehicle industry—1 much needed alternatives to a w still heavily in debt to tradit nal still heavily in debt to tradit hal practice. Wood window makers led to concentrate on two things—lev should enlist much better superfrom that oddly isolated and impervious trade, the lock and fast ner makers and they should try to develop the storey height unit with interchangeshillity of tenul. interchangeability of 'panel.'
To look back over the deve-

ment of a particular class of products is to see in the building industry two main characteristics. First the solutions of different problems are too divorced from each other. One maker solves the heat loss problem, another the conundrum of how to open and close and a third deals successfully with maintenance. Se-cond, the astonishing variety of windows offered seems too great for the variety of needs encountered in practice. And yet some needs remain very thinly catered for. Failure to reach an economic functional balance must of course be

[continued on page 296

10. Really aluminium vertical sliding windows,

section and chart, 11, section of Crittall's aluminium vertica.



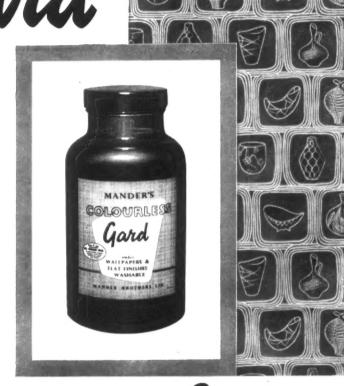
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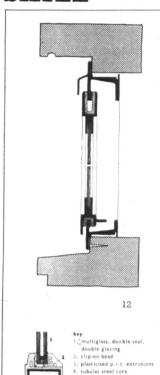
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continued from page 294]

laid partly at the door of the architect. His type of training—to design the purpose made building—is at odds with the growing economic pressure in industry towards standardized quantity production. British Standard Specifications represent one attempt to define at least a provisional economic balance, but as the non-standard windows shown here

reveal, the BSS does not derive from basic functions. Even if such were the aim of the Institution it would be a difficult one to attain because the customary and the familiar are so strong among the criteria of choice. After all, the window was a deeply rooted social symbol long before we submitted it to functional scrutiny.

THE INDUSTRY

Wood Floors

Wood seems to have very largely recovered the ground lost after the war in domestic construction. As though to consolidate this state of affairs, TDA have issued a very handsome booklet entitled 'Wood Floors' which gives in diagrams and tables nearly everything the architect will want to know. 'Floors' are interpreted both as 'Floorings' and as constructional floors and there are neat drawings with notes on all the variations that you can easily think of. Particularly useful are tables showing which timbers to use for such specialized purposes as gymnasia, ballrooms and skating rinks. This useful office reference costs 3s. and can be obtained from TDA, 21 College Hill, London, E.C.4.

12, section of Quicktho aluminium vertical

13, Mipolain plastic coated steel window.

Heating and Electrical Services

Despite the poor economy of electricity production and its relatively high cost, floor warming systems have gained ground rapidly because of their low installation cost and ease of running. Now, another firm joins the market with a nylon insulated and p.v.c. sheathed cable. Ratings of between 2 and 6 watts per foot run are obtainable and the makers suggest a consumption of between 1,250 and 1,500 kW hours per 1,000 watts of cable, per 31 week heating season. They recommend cables to be about 2 or 2½ in. down from the surface to give a surface temperature of not more than 75°F. For setting out the loops, they supply flanged metal discs with a centre pin which you drive into the concrete; these are then covered with cement dabs—to hold them during screeding.

The system is called the 'Flora-

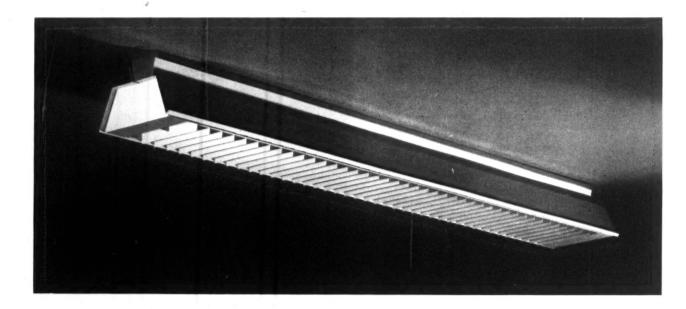
The system is called the 'Florawarm' and the makers, Falk Stadelman, provide a design service. Falk Stadelman & Co. Ltd., 91 Farringdon Road, E.C.1.

CONTRACTORS etc

Hostel at Holland Park, Lot lon, Architects: Sir Hugh Casson & Ne dile Conder. General contractors: be dile conder. General conders and specific dile conders. Holland and Hanne | & Cubitts Ltd. Subcontractors and appliers: External wrought iron rail: graph colors. Leaver and Sons. Heating and boilers: Mumford, Bailey and Preson. Electrical: Waring, Withers on Electrical: Waring, Withers on Chadwick. Metal windows: Winderia and Waring. Frommon: gr. Sharpe and Fischer. Stair balastic les; Morris Singer. Plumbing and sold water: E.S.I. Brick supplier: Su sex and Dorking Brick Co. Stone par gr. Concrete Stone Co. Concrete Stone Co. Concrete Stone Co. Concrete Stone Co. Con

Factory, Research Laboratories and Sales Block at Duxford, Cambridge, Cansulting engineers (factory and research laboratories): Ove Arup & Partners (architect: P. M. Dowsou, Architects (sales block): Westwood, Sons & Partners, General contractors (factory and research laboratories): William Sindall Ltd.; (sales block): F. J. & T. E. Prime, Heating and ventilation: G. N. Haden & Sons Ltd.

[continued on page 298



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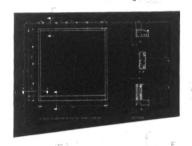
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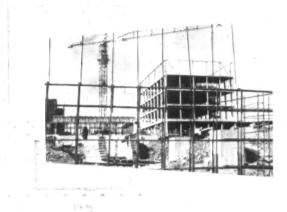
CONCRETE CONSTRUCTION

Started last March, and growing apace, Dundee's Kirkton High School will be the largest school to be built in Scotland since 1939. Occupation of the first phase is planned for early 1960.

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REVIEW 26.

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Correction

August-September issue Joseph Freeman, Sons and Co. i.td. advertised a building in Princes' Gate and said that the architects are T. Mortimer Burrows and Partners. In fact the architects are Adie, Button and Partners, to wom Joseph Freeman, Sons and Co. Ltd. wish to apologize for the inconvenience that has been caused to

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